THE LITERATURE OF THE GARDEN.

MEN AND WOMEN BLOSSOMING EVERY YEAR—OUR FOOD, EXERCISE, ETC.

ALL our best literature teems with allusions to gardens; most happy do we esteem those who resemble the man of whom it was said,

"The fields his study, Nature was his book."

Leigh Hunt's "Sudden Fine Weather" contains some verses that, for sprightliness and novelty of thought, will strike some of our readers. He suggests:

"Ah, friends! methinks it were a pleasant sphere
If, like the trees, we blossomed every year;
If locks grew thick again, and rosy dyes
Returned in cheeks, and raciness in eyes,
And all around us, vital to the tips,
The human orchard laugh'd with cherry lips!

Lord! what a burst of merriment and play,
Fair dames, were that! and what a first of May!
So natural is the wish, that bards gone by
Have left it, all, in some immortal sigh!"

This is all very agreeable to think about; but see how he dashes cold water on the idea, in the succeeding lines!

"And yet the winter months were not so well;
Who would like changing, as the seasons fell?
Fade every year; and stare, midst ghastly friends,
With falling hairs, and stuck-out fingers' ends?
Besides, this tale of youth, that comes again,
Is no more true of apple-trees than men.
The Swedish sage, the Newton of the flowers,
Who first found out those worlds of paramours,
Tells us, that every blossom that we see
Boasts in its walls a separate family;
So that a tree is but a sort of stand,
That holds those filial fairies in its hand;
Just as Swift's giant might have held a bevy
Of Lilliputian ladies, or a levee.
It is not he that blooms; it is his race,
Who honour his old arms, and hide his rugged face.
Ye wits and bards then, pray discern your duty,
And learn the lastingness of human beauty.
Your finest fruit to some two months may reach:
I've known a cheek at *forty* like a peach."

It must be admitted the above is well considered, thoughtfully expressed, and attractive enough in its way; but it is right to give a little moral along with the verses; it is conveyed in lively metre, and here it is the poet, still Leigh Hunt, an especial favorite as an essayist as well as rhymer, is making an attack upon high living, and the warnings which great feeders exhibit in their eyes, noses, &c.; and this is the moral:

"This made, t'other day, a physician declare,
That disease, bona fide, was a part of our fare.

For example, he held that a plate of green fruit
Was not only substance, but colic to boot;
That veal, besides making an exquisite dish,
Was a fine indigestion, and so was salt fish:
That a tongue was most truly a thing to provoke,
Hasty-pudding slow poison, and trifle no joke.
Had you asked him accordingly what was the fare,
When he dined t'other day with the vicar or mayor,
He'd have said, "Oh, of course, everything of the best,
Gout, headache, and fever, and pain in the chest."
'Twas thus too at table, when helping the meat,
He'd have you encourage the people to eat,—
As "Pray, sir, allow me,—a slice of this gout;
I could get no St. Anthony's fire—it's quite out.
Mr. P. there,—more night-mare? my hand's quite at leisure?
A glass of slow fever? I'm sure with much pleasure.
My dear Mrs. H. why your plate's always empty!
Now can't a small piece of this agony tempt ye?
And then leaning over, with spoon and with smile,
Do let me Miss Betsey,—a little more bile?
Have I no more persuasion with you too, Miss Virtue?
A little, I'm sure, of this cough couldn't hurt you."

The conclusion is too good to omit:

"Each his ways, each his wants, and then taking our food,
'Tis exercise turns it to glad-flowing blood.
We must shun, it is true, what we find doesn't suit
With our special digestions,—wine, water, or fruit;
But from all kinds of action one thing we may learn,—
That nature'll indulge us provided we earn.
We study her fields, and find "books in her brooks;"
We range them, ride, walk, and come safe from the cooks.

Thus I look upon shoes whiten'd thickly with dust,
As entitling the bearer to double pie-crust;
A mere turnpike ticket's a passport to lamb,
But a row up the Thames lands you safely at Ham."

All which, if it strikes the reader as it does us as very pleasant, will help to make the volume of 1858 readable some day when it snows or rains.

AGRICULTURAL HUMOR.—Of the Amherst, Mass., Cattle Show, the Springfield *Republican* says: "There is a quaint humor in the making up of the committees upon stock, etc., which is a new feature in "Cattle Shows." For instance: The committee on cattle, upon the principle that 'He who drives fat oxen should himself be fat,' was composed of eight gentlemen whose aggregate weight is over two hundred pounds! Then the committee on calves (most impudent selection) was wholly composed of members of the last Legislature. The committee on fowls were gentlemen from several towns about here, all of them blessed with the name of Fowles. But the happiest thing, and one that really had a good grain of satire in it, was the committee upon maple sugar. This was made up of 'sweet-hearts,' three gentlemen and three ladies who were known to be engaged to be married, being upon it. Poor things! Those who appointed them knew that it was only right that they should nibble a little sugar now, to make some small amends for the future that lies so near before them."

COTTON.

We have lately received a curious pamphlet from the writer, a personal friend and correspondent, who himself accompanied us to Cuba, and visited the cotton districts, last year, to ascertain for himself what was the prospect of a future supply. He was most kindly received by the planters, and was more than once told he was almost the first great cotton spinner who had visited the source of England's great commercial prosperity—the place where nearly all the cotton they use is grown.

Henry Ashworth, Esq., of Bolton, a philanthropic mill owner, and a far-sighted political economist, is convinced that the capacity of our cotton lands is, to a certain extent limited ; and he is alarmed, or his countrymen are, about the supply for the increased and constantly increasing number of spindles ; he also asks what is to become of England should the cotton plant of the south be attacked by any disease, as the potato and the vine have been. It is a serious question which the English are endeavoring to solve by introducing a new system of land ownership in India, by looking to Africa for cultivatable land, and other expedients. No fear need exist that this competition will affect our cotton districts, at present at least ; but the pamphlet contains some curious matter, prepared so cleverly, that we make use of a little space for its insertion, quite confident that it possesses interest for readers in every section of this extended land. The gigantic strides in the progress of cotton consumption is given in a table which may be thus reduced : beginning with the year 1701, and proceeding to 1764, the date of the first improvement in spinning, we find an annual English import of cotton of from one to two millions of pounds, which was, to a large extent, consumed as candlewicks. Proceeding from the first germ of invention, 1764, to the year 1856, which was the last year of full employment, we find nine hundred and twenty millions consumed.

The number of persons employed in the cotton factories of the United Kingdom in 1856, was 379,213, each one considered to represent three new workers. The above are those actually employed in the factories, who are only a small proportion of those working in all the other branches of the cotton manufacture, which are not subjected to factory inspection. The population of Lancashire was in 1750, 297,400 ; in 1851, 2,031,236 ; this great increase being mainly attributable to cotton. In 1760 Liverpool contained 25,787 inhabitants ; in 1851, 258,346, or if the adjoining precincts are included, 376,000, besides about 12,000 seamen.

The improved value of property most remarkable, is Chorlton-upon-Medlock, adjoining Manchester. In 1590 it was sold for £320 ; in 1644 for £300 ; in 1794 for £42,914 ; and in 1853 the annual value for the county assessment was £143,151, or, according to the value of the fee simple, the increase is upwards of 50,000 per cent in little more than two centuries, contiguous estates scarcely improving at all.

It is believed, on good authority, that in the neighborhood of Belfast the sewed muslin embroidery trade furnishes employment for about 200,000 women and girls, and the richness and beauty of this work may be estimated from the fact, that a handkerchief, the ground of which cost 3s. may be rendered worth £8, about $40. The price of a pair of cotton stockings may range as high as two dollars and a half, or may descend as low as a few cents ; thus affording, at an easy expense, stockings to the feet of

millions of people who never before have enjoyed that comfort. Going through similar results of the lace trade, we come to the worsted manufacture. Amongst the recent and most important of the advantages derived from cotton, has been its admixture with wool, mohair, alpaca, linen, and silk.

This manufacture of worsted stuffs was sewed for female garments especially for winter, and the damask for household drapery, but the wool of which it was composed did not admit of being wrought into light fabrics, such as the progress of taste required. Hence, only about 25 years ago, the prospects of this trade were gloomy indeed; the demand for lighter fabrics in wool, aroused the energies of trade, and the difficulty was overcome by the opportune discovery of a mode of admixture of a warp of cotton with a weft of worsted, and eventually with mohair, alpaca, or other substances, but principally with worsted; and the successful issue of this union has imparted new life by the creation of a new branch of industry in the worsted manufacture, and without inflicting entire extinction upon that previously in existence. A warp of cotton is made to form the length of the piece to be woven, and the cotton threads, being much finer and stronger than threads of wool, receive within their meshes the weft of worsted shot across, and which, in many of the cloths, imbed themselves so deeply into the substance of the wool that the cotton portion of the web becomes completely hidden, and thus a fabric is constructed of little more than half the thickness and bulk that would have been presented to the eye if the length as well as the breadth of the piece had been of wool alone.

Contrary to custom, instead of an increase of price, increased cheapness by the introduction of cotton has kept pace by the growing demands of taste and refinement. But in the first instance, the completeness of this success was seriously impeded by the difficulty of dying the goods. The usual chemical process for the dying of wool did not answer when applied to a piece of cloth composed of two fibrous substances so dissimilar in their nature, one being animal, and the other vegetable. After a series of chemical operations, more or less intricate, and after great outlays by the dyers, this difficulty was overcome; and in the wide field of raw materials thus opened out, there has been accomplished a most wonderful addition to the extent and variety of modern manufactures.

Cotton, as a raw material, admits of being wrought into garments for the poor at the low sum of twelve cents per pound weight; whilst a single pound of long staple cotton worth eighty-five cents, can be made to furnish employment and wages to the extent of one thousand dollars in articles of decoration for the rich. The material for a full dress of outer garments, if composed of wool, would cost not less than eight dollars, whilst the same quantity of material for cotton, and of more durable quality, would be two dollars to two dollars and a half. The laborer's wife may purchase a neat and good cotton for eight cents per yard, making a dress for fifty-six cents.

The cheapness and utility of cotton have commanded for it a preference which is almost universal, not only for decorations and clothing, but for bookbinding, as a substitute for leather, and for other purposes. The waste cotton made during the processes of manufacture, is wrought into coarse sheets and bed covers, which are sold at from twelve to eighteen cents the pound. The residue of the waste is used for the manufacture of paper, the cleaner portion being for writing paper, and the sweepings from the floors of factories supply a large proportion of the paper mills of Lancashire with

the raw material of the paper which is used for printing books and newspapers.

The animus of the pamphlet is to prove that while all the elements of continued prosperity are in the possession of Great Britain except the command of a regular and adequate supply of raw cotton, this constitutes the feet of clay of their otherwise gigantic power; they are dependent upon the United States for seven-ninths of their supply, and in view of a possible epidemic, they are convinced that their supplies should be drawn, not from one source alone, but from a variety of sources, as a regularity is needed, and a provision also against the inconvenience arising from scarcity and dearness. An advance of one English penny in the price of cotton amounts to twenty millions of dollars a year. The present stock in Liverpool is only equal to the consumption of three weeks. That from Africa last year would run the entire English mills just *one hour!* The entire failure of a cotton crop would entirely destroy, and perhaps forever, all the manufacturing prosperity England possesses; a reduction of the crop from three to one million of bales, would reduce the manufacturing and trading classes to irretrievable ruin; millions would be deprived of food, and as a consequence Great Britain would be involved in a series of calamities, politically, socially, and commercially, such as cannot be contemplated without dismay.

In view of this state of things the manufacturers have formed themselves into a Cotton supply Association, for the purpose of diffusing information on any new project for the culture of cotton. But they have already ascertained that obstacles exist, local or political which would render it inexpedient to raise the necessary capital for an investment; they are looking eagerly, anxiously, to Africa and India; in the former there can be no hopes for immediate results. The remodification of the government of India may possibly produce a change, and great efforts will now be made to do something practical in the way of European settlers, tenure of land, improved modes of transit and bounties for encouragement.

This is the great problem of the day, and as it concerns us all, but especially a numerous class of the readers of this journal, we have occupied the space necessary for giving the views of those interested abroad; to the solution of the great question, time must put its seal.

CICERO ON COUNTRY LIFE.

Mr. Editor: I send you a translated extract from Cicero's well-known essay "De Senectute." If you print it, I shall be justified in announcing the first of Roman orators as one of your occasional contributors. We shall thus be even with the spiritualists. Perhaps you will think I am sending coals to Newcastle; for it is true that your great-grandfather, James Logan, founder of the Loganian Library of Philadelphia, wrote out a translation of Cicero's "De Senectute," with an extensive body of entertaining and scholarly notes, which was published by his friend, Benjamin Franklin in 1744, and was the second classical work issued in America. My own rendering of the chapter on the pleasures of rural life, is rather loosely made. Mr. Logan's may be better. But most of your readers will never know, unless you print the two together. I promise to keep the peace with Mr. Logan. It will be an honor to be outshone by one who had Franklin for his printer, and who was the secretary of William Penn.

James Logan, in 1735, communicated to Peter Collinson of London, an account of his experiments on maize, with special reference to the sexual doctrine, which was printed in the Philosophical Transactions. This was afterwards printed in a Latin essay at Leyden, with the title *Experimenta et meletemata de Plantarum Generatione.* The same work was republished in London, with an English translation by Dr. Fothergill in 1747.

Cicero talks somehow thus in chapter xvi. :

"I come now to speak of the enjoyments of farmers, with which I am wonderfully pleased. They are hindered by no age, and seem to me to belong most appropriately to the wise man's life. For farmers keep an account with the soil, which never repudiates their sovereignty, and never returns without interest what it receives. Indeed, crops alone do not delight me, but also the vitality and nature of the soil itself. This, when it has taken to its softened and subdued bosom the scattered seed, at first holds it buried, next it swells the seed warmed with its own heat and pressure, and brings forth from it the springing greenness ; which relying upon the fibers of its roots, gradually matures, and reared on its jointed stalk, is enclosed in sheaths, now growing pubescent, as it were. When it has emerged from these, it yields the produce of the ear, arranged in order, and is protected against the depredations of the smaller birds by a *chevaux-de-frise* of bearded spikes. Why should I describe the plantings, growings, and multiplyings of vines ? That you may understand the refreshment and comfort of my old age, I allow I cannot be sated with delight. I pass by the energy itself of all plants reared from the soil, which from the fig-seed so small, or from the grape stone, or from the very minute seeds of other plants and trees, produce so great trunks and branches. As for mallet-shoots, suckers, cuttings, quick-sets, layers, do they not cause these results that they fill every one with admiration ? The vine, for example, is naturally a trailer, and unless sustained, falls to the ground. In order to erect itself, it embraces with its tendrils, as with hands, whatever it meets. Creeping along with a manifold and devious growth, the skill of the farmer pruning it with a knife, keeps it in check, lest it become over-woody, with branches, and too widely diffused in all directions.

"As spring advances there appears at the joints of the branches what is called the bud. Springing from this, the grape discloses itself, which increasing, both from the earth's nutriment and the sun's warmth, is at first very sour to the taste ; then, having matured, it grows sweet. Sheltered with leaves, it neither wants a gentle heat, nor protection from the sun's excessive fervors. What can be more welcome in use, or more beautiful in appearance ? Not only the profit pleases me, but also the culture, and characteristics ; the rows of props ; the yoking together of their tops ; the tying and propagating of vines and shoots ; those processes which I have mentioned– the amputation of some branches, the layering of others.

"Why should I describe the waterings, ditchings, trenchings, by which land is made richer, more productive ? What shall I say about the advantage of manuring ? Homer makes Laertes beguile the sorrow he felt for his son, by tilling the soil and manuring it. Not only are rural pursuits joyful in crops and meadows, and vineries, and plantations, but also in gardens and orchards ; also in the pasture of flocks, the swarming of bees, and the variety of flowers. Not only do plantings please, but likewise ingraftings, than which agriculture has nothing more curious. I finish the subject with the brief remark, that nothing can be richer in use, or finer in appearance than

a field well cultivated. For enjoying this, age not only presents no hindrance, but even invites and allures. To themselves, therefore, let the young keep their arms, their horses, their spears, their club, their ball, their bathings, and runnings. To us, the aged, let them leave the huckle-bones and dice. Let them leave whichsoever of these two amusements they please, since, without them, old age can be happy." E. N.

Hamilton College, Aug. 6, 1858.

VILLA PARKS.

BY HOWARD DANIELS, NEW YORK.

The growing taste of our citizens generally for summer residences, country life, beautiful scenery and rural enjoyments, prompts me to make a few suggestions on a subject which I have earnestly desired to see receiving proper attention in this country, since visiting the splendid examples at Birkenhead, Liverpool, Manchester, Sheffield, and many other towns in England.

Villa parks, in England, consist of groups of villas, with gardens of greater or less extent, surrounding a park of from ten to an hundred or more acres, which is owned, managed, and used exclusively by the residents of the surrounding villas. This arrangement enables the possessors to realize the maximum amount of enjoyment at a minimum cost, and by a little care at the outset, it secures congenial neighbors and good society.

The vicinities of most of our cities, particularly New York, are favored with many localities admirably adapted for villa parks. Associations of individuals, who would unite in purchasing the land and making the improvements, would not only obtain choice sites at cost, but would secure a greater number of the enjoyments pertaining to private parks, a higher degree of perfection in the improvements, and these permanently. By the united efforts and capital of little communities, parks of considerable dimensions, improved in the best style, can be created, that no individual would accomplish for his own private purpose.

The villa sites should be well wooded, have fine views of the park, and, if possible, command views of fine distant scenery. They should embrace a lawn around the house, a flower garden, a fruit and vegetable garden, large enough to raise all the better sorts of fruits and vegetables for a private family, and if possible pasturage for a cow and horse; in short, they should embody a complete country home, where the owner, if an amateur horticulturist, may spend his leisure hours in cultivating and training his favorite trees, shrubs, flowers and vegetables.

The park should be centrally situated, well wooded, and if a stream of water is embraced within its limits, which can be expanded into a lake, or made to dash over a ledge of rocks, or play a fountain, it will form one of the greatest attractions. The sight of water in our hot summers always produces a grateful sensation, by imparting at least a semblance of coolness, in addition to the beautiful and varied effects which the influence of atmospheric phenomena beget.

The park should be laid out as the grand central feature of the enterprise, having fine drives, broad walks, verdant lawns, play grounds for the children, &c., and should contain the finest trees and shrubs that can be cultivated. The improvements should be made to produce the greatest possible number of fine scenes, each having a distinctive character of its own, form-

ing a complete picture of itself. There should be provided shady promenades, cool resting-places, in the form of pavilions, temples, kiosks, rustic covered seats, &c., either commanding fine views or terminating vistas. A healthy locality, contiguous to a railroad or steamboat route, situated in a good neighborhood, having pleasant drives and good building materials are matters of the first importance.

Not the least important point in the success of an enterprise of this nature is the laying out and finishing up of the *park at least*, in the most skillful and artistic manner (and if the lots are partially improved so much the better), making a complete thing before the sale of a single lot, and not a speculation, or a paper plan only, sold out at auction, leaving the lot purchasers to finish what the land speculator promised and was paid for, but failed to carry out to its accomplishment.

RESIDENCE ERECTED FOR W. GUMMERE,

GERMANTOWN, PA.

The economy obtained in the plan of this building is remarkable. The contract was taken at $5,700, exclusive of range, heater, and mantels, while an ordinary "double" square house, erected at the same place and time, with the same number of rooms, and about the same average size of rooms, cost $7,000. The difference is much the more remarkable, on account of the neighboring house having been completed in plaster externally, with wooden partitions and ordinary finish inside, while the house forming the subject of our sketch is finished externally with hewn stone, the inside partitions in the first, and partly in the upper stories, being of stone or brick, and the finish throughout unusually good and substantial. The amount of waste room however, in the neighboring house, is, as might have been surmised, great; while I think it will be difficult to point to a single cubic foot of wasted room in the plan now under examination. As regards the degree of picturesque beauty obtained in this arrangement, especially when contrasted with a three-story square house, the architect must leave this question to the taste of the readers of the *Horticulturist*.

The plan embraces an entrance hall, 10 ft. wide, with a coat closet, a very cosy "library and breakfast room" with closet for books and china, a large square parlor with bay window, a spacious dining-room with two china closets and pantry, and convenient inner and outer kitchens. Above, are chambers, bathroom, closeting, and the observatory. The verandas are ample and shady. The plan of a side entrance was adopted in order to narrow the front to a proper proportion with the width of the lot (80 ft.) and to avoid too much cutting up of the front lawn with the carriage road. I think the plan, however, would strike the eye very pleasantly, if erected on a wider domain, though in the latter case some modification might be advisable. The effect of a two story building, more agreeable to rural simplicity than that of a towering three story, is here produced, notwithstanding the existence of an actual third story, (level-ceiled over three-fourths of its space,) by the depth given to the cornice on the wall, and the high heads of the second story windows, by which the architectural effect of these features is also increased, while the economy in roofing, &c., obtained in a three story over a two story building, is preserved.

Contributed by R. Morris Smith, architect,
146 So. 4th St., above Walnut, Philadelphia.

RESIDENCE ERECTED FOR W. GUMMERE.

FONDANTE DE MALINES*—(MELTING OF MALINES.)

This fine fruit originated, in 1842, in the garden of the late Major Esperen, the well-known and successful pomologist. The first crop was a very large one, and every fruit proved of equal good quality and perfect size.

The shape of this pear seems to have undergone a great change, as it is often the case with *seedling fruits*, which vary in form for a certain time, till that form becomes at last fixed by artificial improvement, by grafting or by natural laws unknown to us. The shape and size of the Fondante in our drawing, is that of a fruit grown in Hon. Marsh. P. Wilder's experimental grounds. The outline is the exact size and form of one of the first fruits, taken in 1842.

Tree vigorous and erect, of a pyramidal form; *shoots*, fawn color, slightly speckled; *buds*, stout, diverging, well set on a broad base, short and pointed; *joints*, regular in two years, but irregular in one year's shoots; *leaves*, middle sized, slightly serrated, dark green.

Fruit, above medium, oblong, or obtuse-pyriform, yellow when ripe, dotted and washed with russet and dark crimson. *Stem* from one to one and a-quarter inch, moderately stout, inserted in a shallow cavity; *eye*, close, rather small, sunk in an even, not deep, calyx.

Flesh, melting, juicy, with abundance of sugar, and slightly flavored; ripens slowly and without decay at the core, from the end of September till late in October, if kept in suitable places.

Like all the fall fruits, it ought to be plucked as soon as it has completed its growth, and allowed to go through the ripening process in a cool room, *rather moist than dry.* As soon, however, as the ripening commences, we always found it better to bring the fruit over to a more elevated temperature. This process develops and completes the aroma of all such pears, which are naturally flavored. This rule applies to almost all the fall fruits, which, if not kept too long in exhibition halls, for instance, are always improved by that rather too high temperature.—*L. E. Berckmans.*

THE LAWTON BLACKBERRY IN FRUIT.

PUBLISHER'S VISIT TO NORWALK.

It is well known to most of our readers, that the Lawton or New Rochelle blackberry, has been disseminated through the country by Mr. William Lawton, of New Rochelle, in this State, and Messrs. George Seymour & Co., of South Norwalk, in Connecticut. The latter gentlemen have a somewhat extensive and very well managed nursery, which, to the enthusiastic horticulturist, is worth going many a mile to see. But its principal attraction, during the last three years, has been the famous new variety of the blackberry. Until the present season, Mr. Seymour has devoted his attention mainly, almost exclusively, to the cultivation of the plants for propagation. But this year he has appropriated nearly three acres to this berry; in so doing, he has afforded those interested opportunity to judge for themselves by actual observation.

* See Frontispiece.

Early in the month of August, by invitation from Mr. Seymour, when the berries were in their prime, we saw the nursery, and sufficiently to show that the Lawton blackberry is among the most valuable varieties of fruit. The ground thus devoted is less than two and a half acres; from this ground Mr. Seymour was sending to market daily, an average of upwards of ten bushels. He had been picking nine days, and the aggregate amount to the period of our visit, was one hundred and six bushels. Single hills, of some three or four canes, in many instances yielded a bushel each. One day during the season, nineteen bushels were picked. The picking is done almost exclusively by boys; eight being employed. Most of the berries are produced from a field separate from the nursery; half an acre being devoted to the fruit in the nursery; and here most of our observations were made. This half acre, which is understood to have received the same culture bestowed upon the rest of the plantation, had already produced some thirty bushels; and probably at least twenty-five bushels remain to be gathered. This is at the rate of some sixty bushels to the acre. Many good judges who have visited the nursery, placed the estimate even higher than this. But any reasonable fruit-grower, might be satisfied with a yield of sixty bushels of blackberries—*such* blackberries, larger, fairer, better flavored than the natural fruit—from an acre of ground.

"But does not this result involve a larger expenditure in cultivation and harvesting?" inquires some one.

Definite information on this point, obtained from Mr. S., proves that the entire expense of the culture of an acre, after the ground has been properly prepared the first year, falls below fifty dollars, and the expense of picking is but a trifle over one cent a quart. Mr. S. employs his boys by the day, paying them fifty cents each. They have averaged, during the season, from forty to fifty quarts each a day. The berries command a ready market at twenty-five cents a quart, wholesale. The commission for selling is one per cent, or one cent for four quarts. The expense of transportation from Norwalk to New York, some forty miles, about the same.

These are the facts in regard to the culture of the Lawton blackberry. What has been stated on this subject, hitherto, has mainly been theoretical; we are now able to state from actual inspection, not only what the blackberry is capable of doing, and what it probably will do, but what it has done, and what it is doing. The yield from the two acres and three quarters cultivated by Mr. Seymour, cannot be accurately arrived at in season for the present number. But if, when the crop is harvested, it fails of reaching two hundred bushels, we shall be obliged to confess, that, with the means of forming a correct estimate, observation and figures have led us astray.

It may be well to glance at Mr. Seymour's treatment.

The past year, he gave the ground an ordinary coat of barn manure, not more than he would afford a field of corn. The second and third years—the present is the third—no barn manure was used. No fertilizer of any kind was employed the second year; this season the ground was enriched with some two hundred pounds of guano to the acre. The staking is the most formidable part of the culture; though, little labor is required for this after the work is once well done. The ground has this season been ploughed twice, and once run over with the cultivator. Mr. Seymour is confident, from experiments he has made, that no better or more profitable manure can be found for the blackberry, than swamp muck, when it can con-

veniently be obtained. He recommends its use in the crude state, without neutralizing by alkalies.

Mr. S. has produced some twenty barrels of wine from the blackberry this season, which commands a ready market at a greater profit than is realized from the sale of the berries.

FRUIT, DOMESTIC AND TROPICAL.

PRICES AND SUPPLY.

THE American Pomological Society met in New York on the 14th of September, and the members discussed several highly important questions.

At the moment these discussions were proceeding, a change is coming over the fruit market, which it would be well to notice, as having great influence and perhaps extensive consequences. The influence of gold is silently disturbing prices; the increase of our steam marine is likewise silently but surely disturbing our consumption of fruit and vegetables. There is more money employed in transferring products of this description from one climate to another, than most people would, on a hasty inspection, believe.

Every steamship that touches at the tropics, or on their borders, brings more or less valuable and wholesome fruit and vegetables. Oranges and bananas, the latter a rapidly increasing favorite, are cheaper than our northern apples and pears. Pine apples are as plentiful in Montreal and Quebec as they were formerly in New York; you can purchase bananas and other West India fruit in every city of the union, and mostly at reasonable prices. The supply of our own products is utterly inadequate to our consumption. Except the small fruits there is no sure crop. Apples in one section or another are giving us the slip; as for a full supply of good pears it is a problem—amateurs, and those who take great pains or incur a large outlay may have enough. We have had line upon line and precept without careful practice; a barrel of the best pears is too dear a product to place in the store-room, and if you do so, many will decay before you know it, unless you pick them over daily. Apples come to us now and then in "favorable" seasons, but private families have ceased to expect a regular and permanent supply. If the temperance men had in their zeal preached a crusade against those articles, they could hardly be expected to be more scarce with the many; and yet you find few children who do not revel in oranges.

This is a discouraging picture, but is it not true? And if not literally true, does it not approach the truth? Are we making the progress in fruit culture that we hoped to do? Does not the frost, the blight, and the insects make the pursuit of money in this line of business, an uncertain matter? In the smaller fruits profits are realized certainly; but we have not felt of latter years, that it would be safe to plant very extensively or to depend entirely on an apple or pear orchard. The tropics now brought so near our shores, are to be main sources of fruit, if we take the people at large.

Another source is open to the northern man. Bermuda, Georgia, (and soon we may hope, Florida,) are pouring their products into our laps with unwonted liberality. Summer apples made their appearance in New York

in the middle of June, from Augusta ; peaches followed by the 10th of July, and were retailed at twenty-five cents the dozen, having a very good taste indeed, and this while the once plentiful supplies from New Jersey and Delaware are a failing crop, both as regards quantity and quality. Our plums have been disappearing every year.

Thus, changes are in progress which the Convention might well have discussed, and if possible told us what we are to do. The actual result seems to be that a few localities are adapted to a given product. We receive our early potatoes from Bermuda and the south : but both the home product and the foreign are so dear as to have been shunned by the poorer classes during several winters, and substitutes have to be found in beans or flour, the latter most happily for the masses, now at a moderate price ; the rich have been largely supplied with yams ; for a variety of early vegetables we resort to lower Virginia, from whence so large is the supply that it supports a large class of dealers and hucksters who regulate their prices by keeping back an over supply, and who really control the market for a long period of the year. A small number regulate the price of cranberries, and either buy up the whole crop or combine to enhance the price ; this is very possible with a fruit that keeps so long and so well, while in strawberries and raspberries a small over stock of such perishable materials is apt to lessen prices within or below a mere paying point.

If an American convention meets to talk over their prospects, and to the best of their ability to counsel and advise their countrymen, a smaller number of fruit *dealers* regulate the prices that their produce shall bring. A few firms control the trade in tropical products, and agree what they shall be worth; two or three control the potatoes of Bermuda, and they have not yet agreed to supply us with that best of vegetables, the sweet potato of the south. Another organization buys up another fruit, and the prices, the most important point to the producer, are a matter of bargain and sale between capitalists who have their profit on every thing we partake of.

A pomological convention might well take *the market* for a theme of discussion, and tell us how we shall obtain individually the fruit that is for sale without its going through so many hands. The product is insufficient, and advantage is taken of the fact to make a victim of the consumer. If you raise Black Hamburgh grapes, you must sell them at fifty cents the pound, while the city dealer gets a dollar or more for what has cost you so much care and anxiety, in order to pay his enormous rent in a fashionable street. It is no uncommon thing for the raiser to starve, and the dealer or forestaller to make a fortune. An agent in cities who takes a small per centage for vending your produce is an able ally when you can depend upon his honesty, while a forestaller is one of those *incubi* on society whose very presence is a pest.

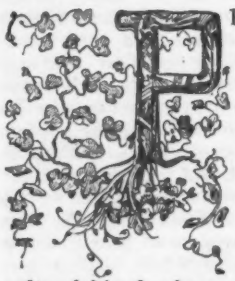
What are we to do for fruit? How give a healthful supply to that large class who are now assembled in our great cities. The convention points out the way to raise it, but another convention is sitting all the year, plotting to buy in the cheapest market and to sell in the dearest ; they are rich enough to regulate prices ; they make more by tropical fruits than by many of the native, and they are conspiring all the time to regulate what we shall eat. Is there any way by which we can counteract them, and bring the wholesome products of the earth within the means of all? The conventions in different parts of the Union are doing much to instruct us on the subject of the best and most productive kinds ; they cannot be expected to do more ; with-

out them we should be badly off indeed. Their value may be estimated by visiting a Spanish settlement, like that of Cuba, where nobody takes the least interest in disseminating information, and where, but for the extraordinary climate, with their habits of neglect and indifference, there would be no fruit whatever. Considering the many difficulties we have to encounter, it really is a matter of interest to see the energy with which our people and their representatives in these congresses pursue the subject. They have done much and must not relax their efforts, or we shall fall into a state of fruit destitution. The orchard-house will more and more be resorted to in northern climates. W.

A VISIT TO THE BUFFALO VINERIES.

BY PROF. W. R. COPPACK.

Longsight Place.



PERHAPS there is no feature in the routine of fruit culture, that marks its progress so distinctly to the passing gaze of the sojourner while strolling through the town, with an eye to its horticultural prospects, than Graperies. These prominent, and ofttimes fanciful structures, are becoming not only numerous, but, in fact, a *sine qua non* with all who lay claim to any of that pomonal enthusiasm of the present decade, and which is so readily engendered, by commingling with, and seeing and tasting these delicious luxuries.

For the past few days, in company with a horticultural friend, whose *penchant* lies that way, I have been making a tour of our Buffalo vineries, which, by-the-bye, are more numerous than in any town of its size in the union—and having taken some "notes by the way," propose to give our distant friends, through the *Horticulturist*, the results.

A prominent feature in this especial culture, is, that unlike the delving processes of garden culture, chiefly done by proxy, this is laid hold of, and passed as a hobby, *appropria persona*. The man of leisure—the business man—the professional man—the divine—all can, and do, enter into the practical manipulation of pruning, thinning, tying, &c. &c., with a zeal that is unmistakable, yet full of earnest pleasure. Then, again, often recur those pleasantries interchanged—those comities and amenities with neighbors, in comparing successes or sympathizing with mishaps, weighing each bunch with dilated eye as to its future *swelling* process—yet unconscious of the insidious sporules that may be forming to mar the exuberant ardor of the *vigneron*.

"*I'm set*"—says a fat man driving a *two-forty*, as he passes a lean friend on a jog trot, coming into town—meaning his *muscats* had set their fruit—"Well, Doctor, how are you prospering?" "Finely—finely—*I'm nearly colored*"—are among the exclamations occasionally heard, and wondered at, by those not grape growers—and then again later in the season, the three, or five pound Hamburgh bunch, with its dark rich bloom—its splendid

round berries of equal size—with shoulders to match—ah, who! who, would not grow grapes?—Chorlton, Allen, Prince and Hoare, are becoming household words; while Bones and Offal, Shells, &c., will, ere long, be reported in the "*price current*" of the day. For a dozen years my own grapery stood alone, there being no other in the town. Now, our city numbers nearly, if not forty. May of them large, elegant, and exceedingly attractive, and of course costly. They are of the span roof—octagon—curvilinear—lean-to, &c., &c., with varied finish and architectural designs, enclosing from a dozen or two to many scores of vines. The varieties embrace all the leading popular kinds, with a fair sprinkling of the novelties. The "*border war*" of carrion versus *nature* is perhaps a divided question; but all aim at getting a rich and strong border. With an exception or two they are all *cold* houses, and yet rarely fail in ripening both fruit and wood most perfectly. Some of the finest specimens I have ever seen, of the Muscat of Alexandria, are now ripening by Capt. Levi Allen, an entirely self-taught and highly successful grower. Mr. Rich Ballymore is another of the same kind, having a beautiful house, literally filled with fine specimens. His neighbor, your correspondent, Mr. John B. Eaton, has a fine curvilinear structure, the finest of that form put up here. It is kept in *tip-top* order, and may be well taken as a model of skill and good taste. Farther on, we come to Mr. G. B. Rich, whose Hamburgh White Tokay, Syrian, and other varieties, are very fine. Perhaps we should do injustice, did we not particularly mention the Hon. E. G. Spaulding; his fruit had been well-thinned, and it has well recompensed for the labor. The berries were large, even, and well colored. How it does go against the grain to be cutting two or three out of every five. "A bird in the hand" rings in the ear, and practice alone nerves the operator.

Dr. G. F. Pratt has two fine span-roof houses, and is ever famous for his fine specimens. We might also mention Mr. Thomas Stephenson—Mr Dennis Bowen—Mr. Dewit C. Weeds—alike fine. But *multum in parvo*. Upon a small city lot, pent up, on at least three sides, with walls of brick or timber, resides our friend Mr. William Coleman—whose miniature garden is the admiration of all whose opinions are desirable—with a charming little vinery of some fifteen canes, among which is a Californian variety. He also grows more monstrosities in the fancy strawberry line, more really rich and rare roses, and miscellaneous flowering plants, more fancy out-door grapes, and fruiting plants, than a multitude of his neighbors having a tenfold area. But the vinery of vineries we have yet to describe. This is the commercial vinery of Mr. Horace Williams. It is nearly seven hundred feet long—a lean-to—built somewhat after the *Rivers* plan. It is twelve feet wide, with an eighteen foot border, to be enlarged. The vines are planted, as is usual here, on the inside, and are of the leading varieties, Hamburghs predominating. The whole show remarkable health and vigor. On the wall, at the distance of three feet each, are vines grown in boxes sixteen inches square. These are designed for removal and sale, as they are brought into fruitfulness. Mr. Williams has an extensive Glue manufactory in the vicinity, which has furnished mainly the material for the border. The facilities for watering are excellent—one end of the vinery being near the Buffalo Creek. Water is raised by horse power into a large cistern, from thence runs a pipe along the back wall, the whole length of the house, having faucets at every short distance. There are nearly seven hundred vines in the house. The structnre is got up cheaply, yet durable, appurtenanced with all that is necessary for the successful growth of the grape. The vines are now chiefly

two years old, and certainly do great credit to Mr. Williams' self-acquired skill. To stand at either end of this imposing range, casting the eye through the whole vista, is indeed a noble sight—a panorama of exceeding beauty.

HOW TO CALCULATE THE COST OF YOUR PROPOSED NEW HOUSE.

BY CHARLES DUGGIN, ARCHITECT, NEW YORK.

It is always a very difficult matter, with parties about to build, to ascertain what the house they propose erecting will probably cost. As a general thing, the person purposing building cannot obtain anything definite without first going to the trouble and expense of having his plans and specifications made, so that he can dissect the quantities of the different materials required, and so arrive at the desired price.

This system generally leads to dissatisfaction, for it is mostly the case that the person about to build has fixed upon the price he wishes to spend before he commences his plans, and misleads himself into the belief that he can obtain a certain sized house for a given sum, his architect's opinion to the contrary notwithstanding, using as his argument that he has certain unusual facilities for obtaining certain materials, or doing certain portions of the work, and also, further, that such and such a person built his house for such a price, and why should he not be able to do so?

Now, to obviate these difficulties, I purpose giving a simple rule for ascertaining the approximate outlay, without being necessitated to first have your plans, &c., prepared; and one that I have generally found to work out correctly.

Having decided on about the style and character of house you require, and what degree of finish or ornamentation you want outside and inside, look around in your neighborhood for such description of house, and ascertain from its owner what it cost. Having obtained the price, then measure the size it occupies on the ground, and also the different heights, and "cube" the whole, so as to arrive at the number of cubic feet of space occupied by the house. Then reduce the number of dollars the house costs into cents, and divide the cents by the cubic feet, and it will give you how much the house you require *will cost every cubic foot of space it occupies.*

When you have ascertained how much such a style of house as you require will cost for every *cubic foot of space* it occupies, set to work and sketch out the plan of a house to suit your requirements; having done so, reduce the same into cubic feet, and when you have ascertained the number of feet your proposed house will occupy, multiply them by the price per foot your neighbor's house cost, and it will give you the approximate cost of your proposed house.

By having the above figures at your command, it enables you to increase or decrease the size of your house, so as to come moderately near to the sum you wish to spend, all of which can be done before you commence to have your working-drawings and specifications made.

To make the above more easily understood, I give below the mode adopted for ascertaining the number of cubic feet of space occupied by a house. It is simply to multiply the width of the house by the depth, and the product

will give you the number of superficial *square feet* in the house; the square feet multiplied by the height will give the number of *cubic feet*.

In taking off the size of the house, do not measure in any of the verandas, as they are not *room* in the house; at the same time, in planning your own house, you must bear in mind not to put in more veranda, in proportion to the size, than your neighbor has, unless you add a proportional amount to your cost. In measuring your height, include about one foot below the cellar-floor, add in the thickness of the different floors, and when you come to the roof, or attic, make proper allowances to suit the slope of the roof, for if the roof be steep, of course measuring to the ridge or top line would not be correct—so, allow accordingly.

In naming the sum a house will probably cost, I generally find it best to leave out the mantels, grates, furnace, hot-air pipes &c., and plumbing, as these vary so much in different houses; but the drains, cistern, cesspool and painting—indeed, everything, with the above exceptions—I include in my figures, and I think a party entering into calculations would do well to adopt the same plan. Of course, if he includes the items I name, in the cost of his neighbor's house, he can rely upon their being included in his own.

In future numbers of the *Horticulturist*, I purpose giving some plans and views of Country Villas that have been erected from my designs, accompanying which, I will state the price they cost per cubic foot so that a party purposing building may be able more readily to decide on the style to adopt for his new house, so as to meet his ideas of cost.

POMOLOGICAL SOCIETY OF GEORGIA.

The Annual Meeting of the above named Society was held at Athens, on Tuesday, August 3d. The officers chosen for the ensuing year were as follows: L. E. Berckmans, President; Richard Peters, Vice-President; Wm. N. White, Secretary; James Camak, Treasurer; Wm. N. White, Chairman; Richard Peters, J. Camak, E. Bancroft, J. Van Buren, Committee *ad Interim*.

A Corresponding Committee was elected by an amendment to the Constitution, to place before the above named Committee any new fruits originating in their respective localities, on which were placed Right Rev. S. D. Elliot, Savannah; D. Redmond, Augusta; R. Peters, Atlanta; Charles Collins, Macon; Thomas Camak, Columbus.

L. E. Berckmans, R. Peters, D. Redmond and W. N. White, were appointed Delegates to represent the Society at the next meeting of the American Pomological Society.

At the conversational meeting, there was a discussion upon the Curculio, in which Messrs. Berckmans, Van Buren, Redmond, Camak, White, and others took part.

The Fruit show was good, considering that the frost the last of April destroyed all the fruit in the upper part of the State.

Mr. Van Buren and Mr. Legg, could give us little except their presence, instead of their usual fine list, and Messrs. Berckmans' collection was mislaid on the way and failed to come to hand in season. The following is the list of exhibitors:

Peters, Harden & Co., of Atlanta, exhibited: *Pears*, 34 varieties. *Peaches*, 16 varieties. *Nectarines*, 1 variety—viz: Stanwick. *Almonds*, 2 varieties.

Apples, 10 varieties—viz: Yellow Horse, Farrar's Summer, Hamilton, Red June, Aromatic Carolina, Rhodes' Orange Pearmain, Jones' Summer, Gore, White, Yellow June, and 1 nameless. *Plums*, 6 varieties—viz: Yellow Gage, Imperial Gage, Bingham, Coe's Golden Drop, August Blue, and Long Scarlet. *Grapes*, 7 varieties—viz: Clinton, Diana, Catawba, Isabella, Lenior, White, and Concord. *Mulberries*, 1 variety—viz: Everbearing. *Quince*, 1 variety. *Apples*, 78 varieties.

This was a beautiful collection; nearly all the specimens being well grown, especially the Pears. The Georgia Cling will be fully described hereafter, it being a variety that should be in every garden.

Prof. J. D. Easter, of Franklin College, exhibited 1 Apple, a very fine summer variety from Ohio, unnamed; 1 Pear—Duchesse d' Angouleme—fine; and a very attractive list of 18 varieties of Peaches.

Of these (Mrs. Wray's Cling), was a new seedling, and merits a full description hereafter. Total, 19 varieties.

The frost, the last of April, destroyed every fruit in Mr. Van Buren's large collection, except 2 Apples, viz: Julien and Horse; 8 Pears, viz: Bartlett, Beurre Diel, Beurre Bosc, White Doyenne, Seckel, Vicar of Winkfield, Stevens' Genesee, and Louise Bonne de Jersey—total 10 varieties.

E. Bancroft, of Athens, exhibited 34 varieties of Peaches.

Mr. Bancroft's Peaches all were extra fine and, taken together, exceeded in beauty, those of any other contribution. Stump the World, Walter's Late, Prince's Paragon, Burden's Rarcripe, Green Catharine, Old Mixon Cling, Chereuse Tardive, Large White Cling, Brevort's Morris, Bloodgood's Late Green, and Old Mixon Free, were particularly fine.

Wm. N. White, of Athens, exhibited 86 varieties of Pears. *Quinces*, 2 varieties. *Apples*, 12 varieties—viz: Rhode Island Greening, Buckingham, Shockley, 1 nameless, sweet; Landrum, Meigs, Yellow Meadow, Nickajack, Summer Queen, Tewksbury Winter Blush, James River, Summer Sweet. *Peaches*, 35 varieties. *Plums*, 14 varieties. *Nectarines*, 1 variety—viz: Elruge. *Grapes*, 1 variety—viz: Isabella. Total 151 varieties.

Hon. I. L. Harris, of Milledgeville, exhibited a Seedling of the Seckel Pear, to which the Committee gave the name of Harris' Seckel (good).

Col. J. C. Branch, of Watkinsville, exhibited 6 varieties of Peaches, consisting of unnamed Clingstones; one variety of which was the largest seedling exhibited, and was named by the Society, The Challenge, a description of which will appear hereafter. Also, a specimen of Isabella Grape. Total, 7 varieties.

J. H. Gray, of Clarke county, exhibited 3 varieties of Apples, unnamed; 2 varieties of Pears, unnamed; 1 variety of Peach, viz: Pace. Total 6 varieties.

Mrs. Hull, of Athens, exhibited 3 varieties of Grapes, viz: Grove End Sweet Water, White Frontignan, and Muscat de Lunell; 3 varieties of Peaches, 2 unnamed, Early Crawford Peach, and Bingham Plum; and 6 varieties of Apples, unnamed. Total 13 varieties.

Mrs. Franklin, of Athens, exhibited 22 varieties of Pears. *Apples*, 6 varieties. The specimens exhibited by Mrs. Franklin were remarkably fair and well grown.

Mr. Micheli, of Athens, exhibited 2 varieties of Apples, viz: Buff (very large and fine), the other variety unrecognized.

Dr. G. E. Smythe, of Athens, exhibited 4 varieties of Pears. *Peaches*, 6 varieties. *Plums*, 6 varieties. *Grapes*, 2 varieties—viz: Warren, and

White Muscat. *Apples*, 4 varieties, Russet, Swaar, and Autumn Pearmain. Also, 1 Lemon, large.

Mrs. H. Camak, of Athens, exhibited 12 varieties of Plums. *Pears*, 25 varieties. *Peaches*, 17 varieties.

Dr. M. A. Ward, of Athens, exhibited 37 varieties of Apples. *Pears*, 31 varieties. *Quinces*, 2 varieties—viz: Portugal and Orange. *Plums* 12 varieties.

A few fine vegetables were displayed; Mr. Sledge exhibiting the very best Irish Potatoes we have seen grown in the State; and Mrs. F. W. Lucas some extra large Beets and Tomatoes.

In looking over and comparing the different lists, we find 568 lots of fruit were exhibited, comprising 368 varieties, of which there were: Peaches, 99; Apples, 74; Plums, 34; Grapes, 11; Mulberries, 1; Pears, 144; Lemons, 1; Quinces, 2; Almonds, 2.

While errors of names were noticed in the collection of amateurs, it was gratifying to see the correctness of names under which those of the Nurserymen were exhibited; and, from sufficient experience, we are prepared to say, positively, that no Nurseries can be more honestly conducted or more worthy of confidence than those in our own midst. In respect to correctness, great improvement is manifest the last two years, and we no longer see the same Pear, Apple, &c., exhibited under three or four different names.

L. E. Berckmans, *President.*

Wm. N. White, *Secretary.*

"HINTS ON RURAL ARCHITECTURE."

BOATHOUSES AND PLAYHOUSES.

Some of the readers of the *Horticulturist* who are so fortunate as to reside on the shores of the smaller lakes so numerous in our northern States, may be glad to learn the experience of a dweller in a similar locality in the construction of boat-houses; for every one knows that the first step toward keeping a boat in good condition, is to provide it with a shelter. Left on the beach it is not only knocked about by waves, but the influence of sun and rain open all its seams, and crack its boards until it "leaks like a riddle." The common practice of drawing it up under a shelter on dry land, by means of inclined timbers or "ways," is also injurious as tending to rack and strain it, while it also demands a degree of muscular exertion not always convenient or pleasant to supply.

After trying several plans, I have been perfectly satisfied with one of the simplest possible. First framing together the sills, I nailed upon them plank, two inches thick, forming a strong and smooth floor. This was floated to the water's edge opposite the point where the building when located, was intended to stand, and "blocked up" so as to keep its level, while the posts and plates and studs were framed and raised in the ordinary manner. After "siding it up" with strong plank as high as the water was expected to cover it (about four feet), the whole frame was shoved out to its chosen location (a smooth patch of sandy bottom about thirty or forty feet from shore), sliding on two long poles laid under it like ways for launching. Being thus placed, the rest of the work was easy, a raft being made which

could be secured against either side of the building, to afford a footing for the carpenter while putting on the clapboards, &c.

The boat-house, as now completed, is fifteen by twenty-five feet, its sills resting directly on the bottom, with posts about nine feet "between joints," which are submerged nearly three feet, so that there is height enough for a man to enter beneath the eaves. A platform or upper floor is laid just above water level, extending across one side and one end of the building, with a width of about five feet; while along the other side runs a ledge eighteen inches wide, just enough to walk on. In the open water-space between, a couple of boats float, "ready—aye, ready" for service, one suited for fishing, with anchor and lines on board; the other, a small iron boat of Francis's patent, with oars and cushions complete, ready at a moment's warning for the use of the ladies of the household, with whom it is a great favorite, from being perfectly water-tight, and always as dry and clean as a

BOAT-HOUSE.

carriage, so that skirts are in no danger of staining. They are taken in and out through a wide door in one end of the building, which extends nearly to the sill, and upwards of four feet above water. The building is reached from the shore by a slight bridge.

I need hardly say, that where all is so entirely in readiness for use at any moment, many a short sail or sunset row is enjoyed, which would be foregone were any preparation necessary.

The building also makes a capital bathing house, having on its floor two or three feet of pure water, which is constantly changed by the action of the waves through a narrow opening left round the walls just above the sills (observe that this opening should be only just sufficient for this purpose, say three or four inches wide; if larger, it will admit too much swell in a windy day, and the boats will knock about and chafe against the platform). A few pins, hooks, and shelves, hold simple conveniences for the toilet; others are stored with hooks, lines and other apparatus for angling; and whether for bathing or boating, the whole establishment is, if not very elegant, at least is complete and comfortable as need be.

Of course, such a structure is best suited only for our smaller lakes, the level of which does not vary more than a couple of feet or so, and where neither heavy waves nor freshets are liable to injure it; but there are many country residences situated on such waters, where the pleasures and advantages of such an aquatic building would much more than repay its cost. The first I built in this way was of rough hemlock lumber, costing perhaps $75. It stood safely for seven or eight years, during which we had "our money's-worth" out of it many times over, and was finally crushed by a huge field of ice driven against it by a storm, while the lake was opening in the spring. My second edifice is a neater structure, in which I have gone to the extravagance of planed flooring, ceiling, and clapboards, and a coat or two of paint, as well as some minor vanities, such as a flagstaff and vane; and I intend to protect it from such accidents as destroyed its predecessor by a pier of crib-work filled with stones. This is to be built on the ice outside the boat-house next winter; and I may remark that a boat-house itself may also be built on the ice, and allowed to settle to its place in the spring. So I built my first, but the discomforts and delays of carpenter's-work in cold weather were such, that I preferred next time to wait till June and do the work as first above described.

It must be remembered, that the ice which freezes fast to the boat-house, is liable to be upborne by sudden thaws, so as to raise the building from its place. This will do no harm, unless it should lift the posts out of their mortises in the sills, which would ruin all; so remember that these timbers must be firmly pinned together. There is also a horizontal movement of the ice, backward and forward, to a small extent all winter, caused by its expansion and contraction from changes of temperature. This will not injure a light and yielding structure such as I have described, which slides backward and forward on the bottom as the ice drives or draws it; but I have seen it move a heavy pier and crush in a stone wall, inch after inch.

I enclose a rough sketch of the form of my boat-house, which, as I have proved it, I can recommend for any suitable situation. If the builder desire, he may ornament and decorate it *ad libitum*, even to the extent of the precedent on Windermere, where a boat-house was crowned by a steeple "for distant effect." The cut and description, however, I believe to include all that is essential.

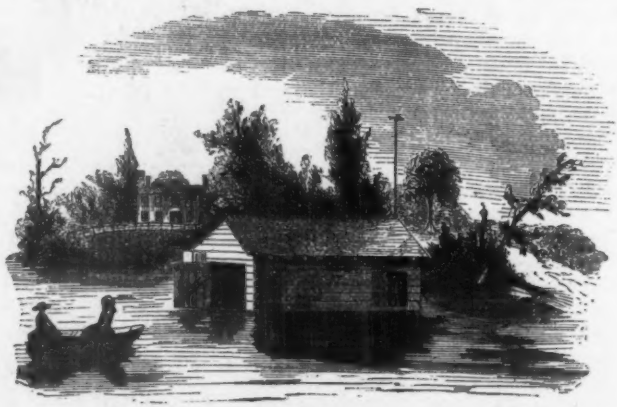
If only some of the readers of the *Horticulturist* have opportunities for boat-houses, most of them have opportunities and suitable tenants for PLAY-HOUSES.

The best plaything for a child, is not a splendid and complex rattletrap, but some simple and rough thing which may be applied to various uses and purposes, and aid to stimulate invention and contrivance. The best of all such things for a girl is a *house*.

My daughter at six or eight years of age took possession of a tiny shed, originally made to shelter a bee-hive. Sundry articles of furniture, of the most impromptu style, some of them requiring a good deal of imagination to supply their deficiencies of construction, were added by degrees;—a board for a table, a box set on end for a cupboard, some blocks for chairs, a scrap of old carpeting, a broom with a broken handle, half a dozen odd and cracked teacups, &c. By-and-by the open side was boarded up, a hole being left for a window and another for a door, which was a board hung on two bits of leather. The pleasure derived from occupying this queer cabin was so great and enduring, that when next carpenters were busy about

could be secured against either side of the building, to afford a footing for the carpenter while putting on the clapboards, &c.

The boat-house, as now completed, is fifteen by twenty-five feet, its sills resting directly on the bottom, with posts about nine feet "between joints," which are submerged nearly three feet, so that there is height enough for a man to enter beneath the eaves. A platform or upper floor is laid just above water level, extending across one side and one end of the building, with a width of about five feet; while along the other side runs a ledge eighteen inches wide, just enough to walk on. In the open water-space between, a couple of boats float, "ready—aye, ready" for service, one suited for fishing, with anchor and lines on board; the other, a small iron boat of Francis's patent, with oars and cushions complete, ready at a moment's warning for the use of the ladies of the household, with whom it is a great favorite, from being perfectly water-tight, and always as dry and clean as a



BOAT-HOUSE.

carriage, so that skirts are in no danger of staining. They are taken in and out through a wide door in one end of the building, which extends nearly to the sill, and upwards of four feet above water. The building is reached from the shore by a slight bridge.

I need hardly say, that where all is so entirely in readiness for use at any moment, many a short sail or sunset row is enjoyed, which would be foregone were any preparation necessary.

The building also makes a capital bathing house, having on its floor two or three feet of pure water, which is constantly changed by the action of the waves through a narrow opening left round the walls just above the sills (observe that this opening should be only just sufficient for this purpose, say three or four inches wide; if larger, it will admit too much swell in a windy day, and the boats will knock about and chafe against the platform). A few pins, hooks, and shelves, hold simple conveniences for the toilet; others are stored with hooks, lines and other apparatus for angling; and whether for bathing or boating, the whole establishment is, if not very elegant, at least is complete and comfortable as need be.

Of course, such a structure is best suited only for our smaller lakes, the level of which does not vary more than a couple of feet or so, and where neither heavy waves nor freshets are liable to injure it; but there are many country residences situated on such waters, where the pleasures and advantages of such an aquatic building would much more than repay its cost. The first I built in this way was of rough hemlock lumber, costing perhaps $75. It stood safely for seven or eight years, during which we had "our money's-worth" out of it many times over, and was finally crushed by a huge field of ice driven against it by a storm, while the lake was opening in the spring. My second edifice is a neater structure, in which I have gone to the extravagance of planed flooring, ceiling, and clapboards, and a coat or two of paint, as well as some minor vanities, such as a flagstaff and vane; and I intend to protect it from such accidents as destroyed its predecessor by a pier of crib-work filled with stones. This is to be built on the ice outside the boat-house next winter; and I may remark that a boat-house itself may also be built on the ice, and allowed to settle to its place in the spring. So I built my first, but the discomforts and delays of carpenter's-work in cold weather were such, that I preferred next time to wait till June and do the work as first above described.

It must be remembered, that the ice which freezes fast to the boat-house, is liable to be upborne by sudden thaws, so as to raise the building from its place. This will do no harm, unless it should lift the posts out of their mortises in the sills, which would ruin all; so remember that these timbers must be firmly pinned together. There is also a horizontal movement of the ice, backward and forward, to a small extent all winter, caused by its expansion and contraction from changes of temperature. This will not injure a light and yielding structure such as I have described, which slides backward and forward on the bottom as the ice drives or draws it; but I have seen it move a heavy pier and crush in a stone wall, inch after inch.

I enclose a rough sketch of the form of my boat-house, which, as I have proved it, I can recommend for any suitable situation. If the builder desire, he may ornament and decorate it *ad libitum*, even to the extent of the precedent on Windermere, where a boat-house was crowned by a steeple "for distant effect." The cut and description, however, I believe to include all that is essential.

If only some of the readers of the *Horticulturist* have opportunities for boat-houses, most of them have opportunities and suitable tenants for PLAY-HOUSES.

The best plaything for a child, is not a splendid and complex rattletrap, but some simple and rough thing which may be applied to various uses and purposes, and aid to stimulate invention and contrivance. The best of all such things for a girl is a *house*.

My daughter at six or eight years of age took possession of a tiny shed, originally made to shelter a bee-hive. Sundry articles of furniture, of the most impromptu style, some of them requiring a good deal of imagination to supply their deficiencies of construction, were added by degrees;—a board for a table, a box set on end for a cupboard, some blocks for chairs, a scrap of old carpeting, a broom with a broken handle, half a dozen odd and cracked teacups, &c. By-and-by the open side was boarded up, a hole being left for a window and another for a door, which was a board hung on two bits of leather. The pleasure derived from occupying this queer cabin was so great and enduring, that when next carpenters were busy about

repairs of our own house, I had a little one built on purpose for our rising generation, the success of which has been so great that I here describe it as a hint for other parents and for the benefit of little people in general.

"Appletree Cottage" as it is named from the sheltering boughs which overhang it, stands on a cross-walk in the garden. It is built of pine boards, without any timber frame, eight feet by ten on the ground, and six feet high at the eaves, neither ceiled nor plastered, but open within to its roof of planed boards. It has on each side two windows, each a four-light sash of 7 by 9 glass, hung on hinges for convenient ventilation; and a real batten door, five feet high, with a knob-catch, and genuine lock and key to secure the property or privacy of its owner.

This was the contribution of Paterfamilias to his daughter's amusement, and it was at once occupied with the intensest satisfaction. Little by little, as in the economical and thrifty progress of older housekeepers, articles of furniture were added. First, there came a present of a real tea-table, with

PLAY-HOUSE.

leaves to let down, suited to the dimensions of the apartment, and three chairs large enough for small people; the next acquirement was a set of small tea-cups and saucers. A tin teapot and a set of knives and forks followed from one quarter, a small broom and dust pan from another; some window curtains were put up by the united exertions of the proprietress and her friends; and at last Grandfather completed the whole thing by sending an "old-maid cooking stove," a little affair but fifteen inches square, but perfectly capable of baking and frying and boiling, and competent to make the apartment as hot and happy as need be.

In this small edifice there has been probably more genuine enjoyment than in most palaces, and I doubt not that the young princesses of Windsor would find it a happy exchange for the stately halls in which they, poor little things, are doomed to dwell. Not only are tea drawn and currant-jelly made, and biscuit baked, and fish fried for hospitable entertainment within its wooden walls, but even the pains of ordinary housekeeping are here converted into pleasures. Mopping and sweeping, dusting and window-

washing are enjoyed exceedingly, and half a dozen times a year there is a delightful general house-cleaning, which recalls to mind Hopkinson's famous description of that annual epidemic, and realizes his recommendation that a small separate building should be provided near every homestead, where its subjects can spend the force of their excitement without disturbing the peace of the household itself.

In all this, there is not only amusement, but wholesome exercise, and even useful practice in housekeeping; and we believe there rarely were twenty or thirty dollars better spent than those which erected and fitted up this little establishment. I recommend it for imitation by the parent where children are reduced to "make-believe" in the corner of their nurseries with tiny pasteboard houses and lilliputian furniture not large enough for dolls. Give them a real cabin in a corner of the garden; do not make it elegant, and do not complete it at once, ready to their hands; but let it be a plain affair and add to its appointments little by little, until it gradually becomes parlor, kitchen, hall, and library all in one. If it is found a pleasant and lasting amusement for genuine and unspoilt children, they may be grateful for the hint to the present correspondent,

OWABGENA.

GRAPES.

BY C. P. BISSEL, EAST AVENUE NURSERIES, ROCHESTER, N. Y.

WE hope to add a few words to those in which Mr. S. Miller, in your June number, expresses his interest in the culture of the grape. At this time, when not only plums, apricots, and nectarines, but our peaches and cherries are affected by successive and serious diseases, we turn to other fruits, hoping that we may find some which, by moderate care, can be guarded from the inroads of inscrutable disorders.

Mr. M. asks, "Do we not sometimes work and trim too much?" We reply, that there is a vast deal of labor performed which cannot be dignified with the title of work in any useful sense. An immense amount of toil is expended upon the grape vines of the United States which is not only useless, but positively hurtful. As to trimming, we reply that if that work be employed in its proper sense, there is no person who does "trim too much." But let us say that a vast deal of the hacking and hewing of our vines in the winter, and of the pinching and cutting of our branches, leaves, &c. in the summer, is too disgraceful to be called trimming.

People forget that all the portions of the vine, roots, stem, branches and leaves, grow naturally in precisely the correct relative proportion to each other. People forget that it is only because man has brought most of the fruits into an artificial condition, that he needs to regulate the growth or proportion of the several constituents of the plants.

One man of our acquaintance, while amputating by the cord, remarked, that "whatever was worth doing at all was worth doing well." In this we agreed with him; but in the meaning of the word *well*, we differed. With him pruning *well* meant cutting off three-fourths or nine-tenths of the results of last season's growth; with us it means judiciously lessening the quantity of wood, so as exactly to balance the vegetative powers of the roots, and so that the reproductive strength may not be too much taxed by an excessive

exhibition of fruit. The leaves are the lungs of the plant, and it is well known to be the return sap which ministers both to the growth of the plant and to the perfection of the fruit. Lessen too much the breathing surface of the leaves, and the grapes suffer a consumption before their maturity.

Our theory for pruning is simply this ; because we have not in our cities, in our villages, or even on most of our farms, the requisite unappropriated space to allow to the vine its natural growth, we must regulate that growth and retain it within the space that we do possess, with two objects in view :

1. The health of the vine.
2. The maximum product of good fruit.

The remarks of Mr. Campbell, in the September number of the *Horticulturist*, are so exactly to our mind, as to supersede much we were about to say on this subject of pruning.

Mr. Miller's questions we take pleasure in replying to, and if we err hope that he will treat it with the leniency with which we know that he is accustomed to treat those who differ from him in some opinions. Mr. Miller's first question is : "Where does the exact point end of foxiness or fragrance and aroma commence?" Mr. Miller says "I love the smell of a rank fox grape. We think that the foxiness ends just where we begin to like the grape, and where no unpleasant reminiscence, flavor, astringency, acidity, or puckeriness is left after eating the grapes. A grape that we don't like is apt to be foxy in proportion to our distaste for it. Our opinion is that foxiness exists to its superlative extent, as Mr. M. says, "in the forest ;" that it extends through all the wild grapes of the woods, Charter Oak, Early Amber, and dozens of others in a gradually lessening series, until it reaches that culmination of excellence, the Diana, where no trace whatever of any such thing is to be perceived.

The second question is as to deep culture, &c. All vegetable organization and growth is supported by the appropriation of sufficient pabulum, by means of the roots to give to the ascending sap a strength superior to simple water. "Our old residents of the forest do not run their roots down," because they dislike to go down deep into a shaded and undrained subsoil which has lain undisturbed for centuries ; and they peculiarly affect the only warm and well aerated soil which is within their reach, viz., that which is "close to the surface under the leaves." In this position, also, the carbon of the decomposing leaves is a manure, and a right stimulating manure, too, to every pore and cell of stalk, leaves or fruit. These same old vines taken out from the forest, and all their roots placed in a deep, rich, loose, well-drained border, will make more wood, and more and finer fruit than they ever did before : provided they have the same space for their branches and leaves to spread upon.

As to the "young vines that have been set out in May," they will send their fibrous roots where the soil is warmed by the beams of the summer's sun, and where they can appropriate the ammonia brought by showers from the atmosphere. They know as well as we, that this ammonia is absorbed by the first soil with which the water brings it in contact, and they seek that stratum of earth with every possible fibril ; because the very spot and the "border a foot wide" that they are planted in is shaded by their own leaves, and the broad surface of their own foliage so sheds the water off, that the surface of the ground, a short distance from the plant, will be moister, warmer, and better supplied with ammonia than immediately around their own stems. As to Mr. Miller's "border 5 feet wide and 3 feet deep." It

is an old Latin proverb, that so far as the branches of trees or plants ascend into the air, so far in the search after nourishment do the roots spread themselves in the fair bosom of the fertile earth. Now, even though we take the sayings of the Roman sages with due grains of allowance we all must know that grape vines with branches extending to 20 or 30 feet in length, will not submit to have their roots confined to a border of only 3 or 5 feet in width, no matter how fertile it may be made with the old boots of a nation or the old mortar of half a city, unless to that fertility we add in some way an ammoniated moisture suited to the necessities of the plant.

The fibrils of the roots go seeking whatever the plant requires, and while they will not place themselves in stagnant water, or impervious subsoil, they will not long hesitate with the query whether the required nourishment is to be obtained by progressing laterally or perpendicularly, provided it is within their reach.

"CAN PEARS BE GROWN PROFITABLY FOR MARKET?"

BY W. R. COPPOCK, BUFFALO, N. Y.

I HAD promised myself, ere this, to respond to the article in your May number under this caption, but time and circumstances have alike prevented. It requires very little confession on my part to admit that I am the unfortunate individual there charged with "constitutional obstinacy," &c., and the hypothesis perhaps indirectly claimed is, that I am the cause of all this sad failure in pear culture.

It is said Teucer flung his shafts from behind a shield, but, alas! no shield has protected his victim. "Confess! confess!" echoes the clarion's blast, while some "Van Mons" sends me the *Country Gentleman*, with the article "scored" for my especial benefit; anon, I have the *Genesee Farmer* (would that all farmers were gentlemen), having the same reference. To say the least of it, it is certainly an ungracious act that lugs one's friend into the breach, to bolster up a weak position.

Now, by your permission, and to save the "Beurrès," I will "confess" nor tell no tale of woe. I am a pear grower, not, perhaps, on so large a scale as Mr. Allen. I have a thousand, mayhap more. My trees are my delight, yet tilled with anxious care, and have thus far greeted me with grateful returns for the labor bestowed. But who, let me ask, that has written for and read a dozen volumes of the *Horticulturist*, would be so ungracious as to expect his dwarfs to do duty, when the lord of the manor neither clothes nor feeds his subjects. Let us see if we cannot understand these sad effects by looking at the cause. "We are all morter (mortal), here to-morrow and gone to-day!" was an oft-expletive of one good soul, who was prone to indulge in the dreamy fit of twilight musing, "doing good business in the future," when the mind, wandering from things sublunary, painted with prismatic colors, the splendid creations of the "Hesperides," where reign supreme the noble Duchess and the good Bonchrétien, with hosts of Flemish Beauties, Doyennés and Beurrès, with something Golden, like the Orange pear. Supposing them realities of his own, instead

of the more sober delving, pruning, manuring, grub-hunting, slug-killing processes of this terrestrial sphere, which the anathema from the garden has rendered imperative, to grow fruit successfully, and especially the dwarf pear for profit.

A most important point to start with is, a healthy, vigorous, sound constituted tree. Who does not know that a dwarf once stunted cannot be recovered? it may live, it may grow, and for a time exist, but never, in my experience, will it laugh and grow fat. Herein lies one cause of failure why pears cannot be grown profitably for market. When Mr. Allen and his "obstinate" friend commenced pear culture, an unlucky invoice of many hundred *cheap* dwarf pear trees, from a New York house, landed in our city. These were divided and sub-divided among the "enthusiastic coterie," infected with the pear mania, Mr. A. taking the lion's share. These, he tells us, were planted, cut down, and grafted, &c., &c. This lot of trash, then, constituted the ground-work of our plantations, and well may those gentlemen say, when asked how their pears are getting on, "Blurt out the fact, dwarf pears are a humbug."

Now, no one for a moment doubts Mr. Allen's skill as a theorist, nor as a racy and entertaining writer on rural matters; but did he pursue the same loose system of selection, feeding, breeding, and general culture of his Devons and short-horns that he has with the practical details of growing dwarf pears for a market, where would be his herd to-morrow? In my own case, having got rid of that stock, I purchased some thousand thrifty, well-grown trees from Messrs. Ellwanger & Barry, Rochester, and have taken care of them, as well as I know how. I read the *Horticulturist* regularly, and got many a good idea from "Jeffreys." Jeffreys' views were chiefly good, and I must say my labors have been well rewarded. A few leading varieties make up my main collection, to which are added a score or two of novelties, to follow in the wake of my friends. We have a ready sale for the fruit, chiefly at five dollars per bushel, wholesale; seldom less than four dollars for the small varieties. My dwarfs yield me annually, with occasional exceptions, fair crops. Last season I took a barrel of Vicar of Winkfield from three trees; this year I can do the same from two trees, as also from the Glout Morceau, the Bartlett, Louise Bonne de Jersey, Stevens' Genesee, Onondago, and some others, are nearly as prolific. In August, I took over 1,700 pears from four Dearborn Seedling trees; about the same rate last season. To-day I have trees propped up on all sides to sustain the crop, and they are the same props, that were used for like purpose, for the same trees last year. I have a row of Bartlett; the seed I took from the Louise Bonne, and sowed for the stocks, in the autumn of '54. In '55, I bedded them. To-day those trees have from 30 to 45 sound, good-sized pears, which will sell, at retail, for four to six cents each. I have Beurré Diels, dwarf, three years old, with equally as many on. I have Beurré Goubault, dwarf, four years old, with 84 fine pears on, worth two or three cents each, &c., &c., with plenty more to match; more, however, I will not enumerate, as these were seen by Mr. Allen, recently, while the fruit was on the trees, and, therefore, he will bear me out fully in the statement. I must also say, in all candor, I hear not the "lachrymose" tone of your correspondent among the cultivators of the pear, save the "coterie," I chance to meet with in our neighborhood; but, on the contrary, have frequent cheerful invitations to see their fine fruits, of which they feel exceedingly proud. From the pear on its own roots, I have, as yet received little profit. From

several hundreds, planted at the same time as the dwarfs, before spoken of, I have had but occasional specimens; nevertheless, from these I entertain great hopes for the future. The blight and borer have taken from me an occasional tree; their place I fill up with other, though smaller.

Now, let me ask, what further can I confess that my "constitutional obstinacy" withholds? Surely it cannot be on the score of courtesy. 'Tis said misery loves company! Can it be Mr. A. desires that I should do as he has done? Forbid it ye gods. I do fear, however, Mr. Allen may think I have confessed abundantly; nevertheless, this subject is not without a moral. It teaches a great practical lesson, and from it we learn the great loss of time and capital in attempting to do manual horticulture in a cozy chair. "Talking fruits" will not grow them. "The pesky trees" won't take care of themselves. That cold retentive clay won't be loam, and was never intended to grow dwarf pears in.

> "Not laughing earth, whose bosom opes
> To clothe this world bright as some fairy bower!"

That rude Timothy, envious of the puny dwarf, enrobed it with a mantle of green so completely as to hide its diminished head, while the pestilent caterpillar, the abominable slug, a streak of bad luck, the "constitutional obstinacy" of his friend and the annihilation of his orchard, drives him to the post, and he asks, "Can pears be grown profitably for market?"

A REPLY TO THE REMARKS OF JOHN B. EATON, OF BUFFALO, N.Y., IN *HORTICULTURIST* OF SEPTEMBER, 1858.

BY JOHN FISKE ALLEN, SALEM, MASS.

Your correspondent speaks first of grape houses, but does not agree with Mr. Saunders in his "belief that a curvilinear roof does not in itself possess any important advantages, and that the gain of more light and less opacity (which he is willing to admit) is the only superiority which such houses possess." He adds, "for myself, I am strongly in favor of curvilinear houses, being satisfied, from my experience and observations, that they not only do possess 'important advantages' over right-lined houses, but are not so much more expensive as Mr. Saunders seems to believe." Now I wish to record my assent to what Mr. Saunders says, and my dissent from the opinion of Mr. Eaton. The experience of a quarter of a century confirms all the facts as stated in my grape culture, relating to position, lean-to or span-roofed houses, as also to the compost for the border. Houses fronting S.S.E. to S.S.W. are the best placed. Grapes, to do well, must have a good soil, and if the natural soil is not suitable, it must be removed and other substituted. I care not whether this be sod from an old pasture, or compost of loam, leaf-mould, stable-manure and decomposed carcasses of animals. Inexperienced persons would do well to use in their compost nothing but decayed matter, either animal or vegetable; hundreds of fruit trees are yearly destroyed by planting them in green manure. Amateurs have read that pears require a rich soil; consequently, the trees are obtained, the hole dug, a barrow of fresh cow, or stable, or still worse, hog-pen manure is placed by

the hole, the tree is planted and covered with this manure, and the soil filled in over all. No tree can live with such treatment; the roots are as effectually killed as if burned in the fire. The same result will take place if a dead animal is buried near the roots of a tree or vine, so that in decomposing the liquid comes in contact with the roots. If placed in the border, all green manures or animal substances must be put under the surface, where they will not be reached by the roots the first year.

Mr. Eaton asks what is the difference in the Royal Muscadine and the Chasselas de Fontainbleau, and it is to this query and some others to which I care mainly to reply.

This is his language: "I should like to be positively resolved whether there is a Royal Muscadine, which is distinct from and superior to the Chasselas de Fontainbleau. It is contended by some that there is such a grape. I suppose that there is little if any doubt that what are usually sold for Chasselas de Fontainbleau, Golden Chasselas and Royal Muscadine, together with two or three other names, are identically the same. If some of your correspondents who possess the so-called genuine Royal Muscadine will give an account of its peculiarities, and a sketch of its history, if possible, I have no doubt that it would tend to clear away some of the confusion which now seems to exist respecting it."

Having grown these varieties for many years, and described them in my Grape Culture, I have naturally been led by the above communication to refer to my account of them. The Royal Muscadine is there fully described, and I can add nothing at this time. Under the head of White Nice, this grape is mentioned as having bunches like the Royal Muscadine. The Xeres, a grape introduced as a new one about ten years since, as the sherry-wine grape of Spain, has proved to be the same as the White Nice. I have never been able fully to satisfy myself that there was really any permanent difference between the White Nice and the Royal Muscadine; yet the form of the bunch is often quite different, the berry of the Royal Muscadine larger than the Nice, the Royal Muscadine having its bunch shouldered on both sides and very thick, while the Nice has only one shoulder, *usually*, and sets its berries thinly, occasionally forming a bunch so closely resembling the Muscadine as to continue the doubt. The berries in both are round and white, turning to amber when over ripe, and usually rather larger in the Muscadine. Flavor the same as in all the Chasselas, that is, Sweet Water. I think the White Nice to be the grape grown in Canada as Canadian Chief. The Early White Muscadine is like Chasselas, rather smaller berry, and ripens a few days earlier.

The Black St. Peters is a very fine grape. You probably over-cropped the vine. Before discarding it, allow the vine to mature a very small crop, say five or six bunches, and train it on the spur system.

The Chasselas Mosque can be grown without cracking. This season, in the forcing-house, a vine produced a good crop without the loss of a dozen grapes. When the fruit begins to ripen, allow the laterals to grow, and all the young wood shoots; this uses up the surplus sap, which, if they were pruned, would cause an over-supply to the grape, and cause it to crack.

BOTANY OF THE U. S. EXPLORING EXPEDITIONS.

THERE are four official reports on the *Botany of the United States Expeditions* for the purpose of surveying a railroad route *from the Mississippi River to the Pacific Ocean*, prepared by order of the American Government, by Drs. Torrey and Asa Gray. The four form a thin 4to volume with 35 excellent plates engraved on stone by Mr. Sprague. These publications do honor alike to science and art, and are worthy rivals of the best of the works of a similar nature published under the direction of European governments. From among the new or rare plants observed in these expeditions we notice several, the introduction of which to our gardens would be highly desirable.

The first expedition under Lieut. Beckwith, who, taking with him Mr. James Snyder as collector, proceeded from the Great Salt Lake in Utah, directly west to the Sacramento valley, in California, seems to have passed through a country yielding little novelty; new species of Viola, Astragalus, Œnothera, Phlox, Phacelia, Pentstemon, Calochortus, and Brodiæa, none of much mark, forming the principal acquisitions. The second expedition, under Capt. Gunnison, accompanied by Mr. Creutzfeldt, was better rewarded; this took a course from Fort Leavenworth, by way of the Kansas and Arkansas rivers into the great basin of Utah, and thence to the neighborhood of Lake Sevier or Nicollet. Several new species were found; among old ones the most important were *Abies taxifolia*, a handsome tree growing from 35 to 40 feet high and 12 to 16 feet in diameter, and an undetermined Pinus without cones, apparently between *flexilis* and *Strobus* on the highest places in the Cochetopa; the leaves grow in fives, and were smeared with a clear, colorless balsam. The third expedition under Captain Pope was not more successful; although its route was 6° or 7° more to the southward, near the 32d parallel of latitude. Little horticultural occurred on this line except *Pentstemon Fendleri*, a species with blue or purple flowers, near P. acuminatus. The last expedition under Lieutenant Whipple, accompanied by Dr. J. M. Bigelow, passed over very fine collecting ground, especially through western New Mexico between 35° and 36° north latitude to the great Colorado River, passing by the valley of Williams' River, commonly called Bill Williams' Fork, one of the tributaries of the great stream. This district is spoken of as a country very rich and peculiar in its flora. A number of new genera and above 60 new species rewarded the exertions of the exploring party. Among the more important acquisitions were the following:—1 *Fremontia Californica;* this rare and beautiful shrub, was found 15 feet high in the Cajou pass of the Sierra Nevada. 2 *Spiræa Millefolium*, a low shrub with the leaves of a Milfoil. 3 *Pentstemon spectabilis*, from the San Francisco mountains in New Mexico and elsewhere, with a crowded panicle of purplish blue flowers, often 2 feet in length. 4 *Quercus erinacea*, a fine Oak with bristly cups and large Chestnut-like leaves, growing 25 to 30 feet high on the Californian mountains. 5 *Taxus brevifolia;* this, the northwestern Yew, Dr. Torrey considers distinct from that of Europe. 6 *Washingtonia gigantea*, which Dr. Torrey, following Decaisne, regards as a species of Sequoia. 7 *Pinus Engelmanni* (a name proposed instead of that of *P. brachyptera*), said to be a very fine species, with leaves sometimes nearly 6 inches in length, common on mountain ranges between the Pecos and Rio Grande quite to the Sierra Nevada; it is called Yellow Pine and Pitch Pine

in some places. 8 *Pinus flexilis;* this is said to resemble greatly P. Cembra; its ordinary height is from 40 to 50 feet, but Dr. Bigelow saw trunks more than 100 feet high. The seeds are eatable. 9 *Juniperus tetragona?* the smooth barked Juniper, of Bill Williams' Mountain, and on hills west of the Colorado, seems to be distinct from the Mexican plant of the same name, having much larger fruit. Dr. Torrey calls it a variety named *osteosperma.* 10 *J. pachyphlœa,* from the Zuni Mountains, in West Mexico, the thick barked Juniper of Sitgreaves, has sweet berries, like the last, which are said to be used by the Indians as food.

How to Lay Out a Garden: *Intended as a General Guide* in choosing, forming, or improving an estate, from a quarter of an acre to a hundred acres in extent. By Edward Kemp, *Landscape Gardener.* Second edition. London, 1858.

Americans have only within a few years turned their attention to landscape gardening; our country was too well supplied with trees, lakes, mountains, and valleys; the pursuit of the *real* was too rife, after the Revolution, to allow space for the imaginative. The forest was to be cut down, and is still, in many places, to be extirpated with fire and steel; but growing wealth, travel, study, pictures, and the natural love of beauty, have fairly induced a desire for adorning home; we begin to know how much comfortable and elegant domestic arrangements are calculated to enhance our pleasures. The spirit once abroad, the realization soon followed; we have arrived at a stage which is so far satisfactory that we have examples of what may be done artistically, in laying out and improving. We can see what it is to give us Nature around us; what she is capable of being when reduced to a smaller compass than in her native

glen and waterfall. Those who do this, and do it with simplicity, with truth, with grandeur or taste, are lords of Nature, and their art is a master-art. Even inanimate and dumb things speak a language to man. His trees expand their leaves in the air, glad of the rain, proud of the sun, awake to the winds of heaven; the clear breeze playing with the branches of the shadowing trees, "the valleys low, where the mild zephyrs use," the distant, uninterrupted prospects, speak in sweet accordance to the heart with nature for its guide. We may say that he

> "Who of these delights can judge and knows
> To interpose them oft, is not unwise."

A good guide is an essential ingredient in making preparations for perfect imitations of Nature. "Our" native Downing, with an eye and a mind that were at once recognized for their beauty and correctness, led us on with consummate art, giving an impetus that cannot be stopped; with every successful turn in Fortune's wheel, the lovers of the country, that natural love imparted to us at the Creation, spring up over our land; home becomes a cheerful, a happy place. It may be that misfortune dispossesses some, but the idea has taken a permanent shape; the desire is no longer with *all* classes to be more wealthy; many desire to be better, to know more, and with enlarged views to enjoy more of intellectual life, and to eschew the too busy haunts of men and their turmoils. The country now contains many who take a philosophical view of life and its duties; who enjoy truthfully, and whose almost sole remaining anxiety is, that their successors may be so trained as to be likewise contented with moderation in the enjoyment of *enough*. Those who have watched the progress of events, the individual cases of citizens with a sufficiency, and compared their careers with those who have sought happiness abroad, can have come but to one conclusion—that *home* is the place for Americans. We could name a wealthy community where it has been so much the custom, *the fashion*, to go abroad that their neighbors are distasteful; excitement has taken the place of rational life, and the insidious enemy of peace has attacked the heads of families, so that this country is "not good enough for them." What may we not anticipate for their children? There is a growing spirit of absenteeism, which if not checked, will do much injury and retard the onward career of our country. The educations received abroad do not make the best patriots.

We can point to no occupation or pursuit so likely to retain our wealthy families at home, so alluring as life in the country when it is properly understood and carried out.

How to lay out, adorn, and occupy a house and grounds in the country, so that it shall continue to attract its occupants to remain, becomes then a question of great importance; it is, therefore, natural that we should welcome every valuable contribution to this end, and give our space to the examination of such books as promise to aid the aspirant after the country, with its health-giving occupations, and its ever new mental pursuits. We therefore notice Mr. Kemp's volume, and in advance of its republication in America shall point out some of its contents as worthy of study: taking the liberty, at the same time, to repeat a caution, that it is not *everybody* that is qualified by previous training to enter upon country life. There are many who like the occupation of building, and forming a home in rural

scenes, who are entirely unfitted to occupy their formations when complete. They must have some love for solitude, some fondness for reading and study, or they must enjoy *work;* without *a pursuit*, the country is uninhabitable. Mr. Kemp is the well-known landscape gardener who laid out Birkenhead park, near Liverpool, and his book has already received so much notice as to make any further introduction unnecessary. While we write, we are in the receipt of an American reprint of this work, from the press of Messrs. Halsted, of 351 Broadway, to whom we owe much obligation for the illustrations politely furnished us for use in this article. Their edition is a fac-simile of the English, and is sold by them, and also sold or mailed, *postage paid*, at the office of the *Horticulturist*, 25 Park Row, for Two Dollars.

At the same time that we strongly commend this book, we must add that without caution the young planter may be led astray if he adopts the lists of trees and shrubs in the work without reference to climate. At the North, many that are commended would not be hardy. The publishers, in a second American edition, which we have no doubt will be called for, should have this matter and some others well looked after by an American editor.

Under the head of "Belts of Plantation," our author says:

"Narrow strips or lines of plantation are among the most tasteless forms which belts can assume, and are equally mean and undignified wherever else they may occur, they can so readily be seen through, and will frequently present, at the lower parts, a mere assemblage of bare stems. Their effect is most meagre. They want breadth and massiveness. Hence, when plantations are necessarily so straightened, they should be composed mainly of such low-growing shrubs and dwarf-trees, especially evergreens, as will, by being planted tolerably close, and furnished down to the ground, produce a thicket-like character, that shall conceal or disguise their actual dimensions.

"In the subjoined sketches, Fig. 1 shows a narrow belt of trees, similar in size and character, such as is frequently seen around the margins of

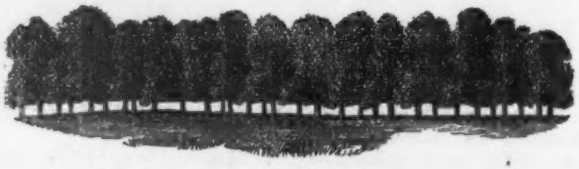


Fig. 1.

small parks, where, if undergrowth of any kind has ever been planted, it has become killed by the density and shade of larger trees. Fig. 2 will

Fig. 2.

serve as a hint of the way in which such a belt may be broken up, and its form still more diversified by the use of a few intermediate bushes, such as Thorns and Hollies.

"The same defect, rendered, probably, a little more manifest from the superior beauty and variety of the ground line, will be apparent in Fig. 3,

Fig. 3.

which exhibits a belt traversing an undulating surface. And the mode of remedying the evil is partially indicated in Fig. 4, where the trees are

Fig. 4.

thrown into masses on the slopes and summits of the swells in the ground; the hollow being left unclothed for the purpose of marking the full extent of its depression."

The observations on these topics are judicious throughout. Under the head of "Appearance of Extent," a subject as yet but little studied among us, by which a small space is enlarged in appearance, we copy the following:—

"Breadth of lawn must be fully attained before any notion of extent can be conveyed. A garden will always look meagre without a good open lawn. * * To make an open glade of lawn appear still larger than it is, the expedient of turfing closely around the plants and masses along its margin may be had recourse to. An object of one color, and that a green one, acquires a striking apparent augmentation of size. And if the plants that flank an open lawn are principally evergreens, and their branches sweep the grass, without any soil being visible, the space is thereby very much expanded in appearance. All walks should, as far as is practicable, be concealed from the house. * *

"There are certain features to be met with in some landscapes, which, though not in themselves inelegant, or deficient in beauty or interest, may have their character and effect very much improved by the way in which they are made visible from a place. Such are church towers and spires,

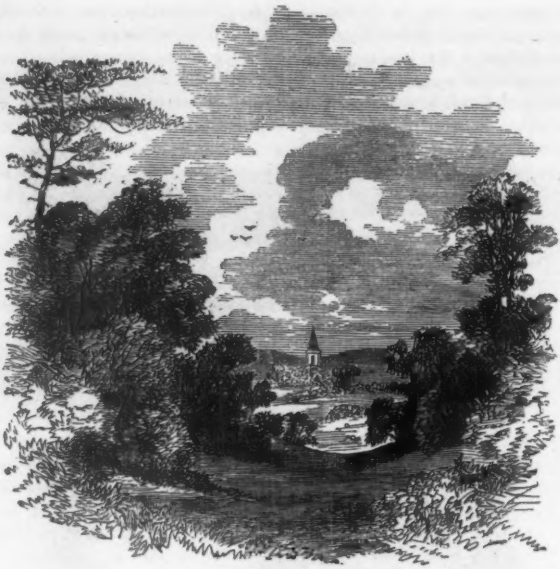


Fig. 5.

(Fig. 5), pillars and obelisks, distant and pretty cottages, prospect and flag towers, ruins, lighthouses, windmills, and many other common-place erections, which may yet, from their position, their outline, or their historical

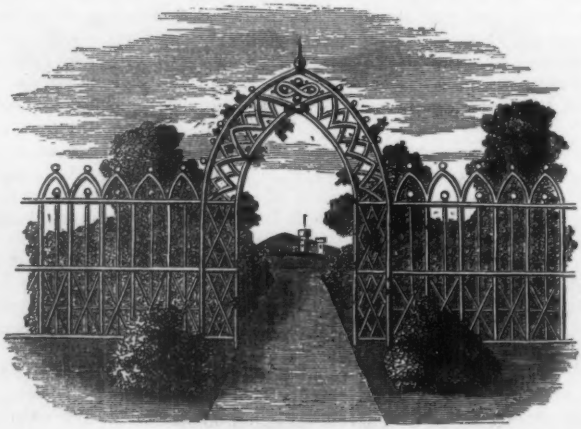


Fig. 6.

or local associations, be worth directing attention to particularly. The most characteristic and effective plan of introducing such to view, is by small openings in the interior or boundary plantations, which shall create a kind of *vista*, at the end of which the object intended to be seen occurs. If the sides of such vistas are tastefully and naturally finished off, without any appearance of formality or indication of art, and the trees in the outer landscape at all favor the design, very beautiful effects may be produced in this manner, out of the most ordinary materials. Or the framework of such openings may have a more artificial character (Fig. 6), the branches of trees or light wooden fences being made into a Roman or Gothic arch. Or the same may be formed out of old stems of trees or wire trellises, clothed with climbers. Rude or more polished arches might also be made of stone or plastered brick, or any similar substance. Either of these might form an artistic framework to a small scene, of which one object is the principal feature."

Space failing us in our cramped domain, we must defer some further extracts and illustrations for another number.

THE retarding of bush fruit is a point too little noticed or attended to, and this chiefly through the pressure of other matters at the period proper to attend to them. Gooseberries, Red and White Currants, Raspberries, &c., look exceedingly ornamental when trained on trellises, providing they can at all times be kept in trim. If, however, they cannot be properly attended to, such had better be omitted. On perpendicular rails, too, they are very easily protected, or shaded, when requisite; and this is a consideration as to both earliness and lateness, as well as to birds. Trellises of strained wire are cheaply knocked up, and may be admirably adapted to their habits. Further, with regard to pruning in the rest-season, a too sparing hand is the common fault. Gooseberries, especially, require more thinning than is commonly awarded them. The interior shoots of the bush, in healthy trees, should be almost entirely pruned away, and the bearing confined chiefly to the extreme points. They are thus gathered with more ease: indeed, the bushes may be stripped in half the time of those choked up in the interior. The fruit, also, is much finer, and the crop will be found to tell amazingly in bulk. As for the Red and White Currants, their side spray—if other points of management be right—may be all pruned close to within half an inch of the main stem. There is, thus, less summer spray to prune back, and the fruit is, in consequence, much larger. Those who grow for exhibition purposes may use liquid manure occasionally, during the swelling process, as also just before the fruit begins to color. This will much increase the size and general appearance.

EDITOR'S TABLE.

To Contributors and Exchanges, &c., &c.

Communications, Letters, Catalogues, Periodicals, &c., &c., intended for the perusal of the Editor, should be uniformly directed to the HORTICULTURIST, *Germantown*, (*Philadelphia,*) *Pa.* Packages by Express, &c, should be directed to the Editor, as above, by name; they will thus reach him almost beyond a doubt.

THE ANNUAL FAIRS are now over, and we may fairly assume that an amount of information has been disseminated, a knowledge of real things acquired, which will tell favorably on the future. These useful fairs take the place in this country occupied by the celebration of Saints' days and holy-days abroad, where there is little actually learned and much time lost. The farmers' sons and daughters here go on very different kinds of expeditions for their amusement from those of any other country; they go to learn, to acquire something useful, and to prepare themselves to be help-mates to their families; how eminently they are so, let those travellers say who have seen *the women* of the old countries and those of the United States; the one reading about everything, and knowing everything; the other scarcely aware that there is any country or any novelty beyond the ken of her own vision.

These fairs, more conspicuously than any other event in our midst, are the surest signs of our progress as a people; the enormous attendance of all classes, young and old, and their decorous conduct there, their intelligent countenances, their comfortable appearance, dress, deportment, their inquiries and suggestions, are truly a marvel when we contrast it with the ignorance and imbecility of the continental laborer, and his uneducated family. It will no longer do to call the farmer a clown; he has been to the best practical school, and is fully prepared to appreciate every improvement in mechanics, in machinery, in ploughing, or in domestic economy; he soon finds out which is best among the sewing, as well as the harvesting machines; he has, too, an eye to the ornamental, and is just ready to decide on the best form of the piano for his daughters. The Fine Arts' tent is one of the most frequented spots of even the farthest western fair, and here are laid the precious seeds of an appreciation of the true forms of beauty, to be employed in judging the best books, the best furniture and the best fabrics. *Progress* is the word everywhere, and the American advances with comet speed. Long may the Annual Fairs form a feature of American life, as contrasted with other European gala-days. We ask no Pope to bless our horses and mules; we feed them and set them to work. No painted and bedizened saint or madonna is paraded to avert a drought—we underdrain and stir the ground; the silks of the wax statues abroad we place upon our daughters; we dig and delve not as slaves to old opinions and routine, but as intelligent learners; our youth come from school full of hope, each one aiming to make his mark; and what do we see everywhere, but industry leading, intelligence teaching, mind predominating, and thousands upon thousands preparing or prepared to give laws to the old world, to beat them at mowing, ploughing, sailing, and even at chess! Where, but at the Annual Fair is all this spirit of advance so forcibly exhibited?

PEARS ON OLD STOCKS.—After all our discussions, we have seen some instances of successful pear crops the past two seasons that were highly satisfactory. They grew on grafts, on old trees whose fruit was no longer worth picking. Old healthy trees are thus a valuable possession. We see this fact confirmed by a writer in the *Country Gentleman* thus:

Other old trees are standing about the fences, which were in full bearing at least fifty years ago. The fruit of these latter trees is wild and inferior, and I am now transforming them by engrafting the leading branches with some of the finer kinds. Budding the succulent shoots, which are sure to appear where the grafting fails, succeeds, and completes the process. In this way some of our large trees which have been bearing worthless fruit for twenty or thirty years, are now covered with fine specimens of the Seckel, &c. Old, rough and unpromising as these stocks may seem, we have as yet found no instance which has not been attended with a reasonable degree of success. No old pear tree is cut down on my premises; it is considered too valuable to lose. A faithful attention to pruning, engrafting and budding, will, in the course of from three to five years, give more fruit than can be obtained from a young stock of twenty years' growth.—R. M. CONKLIN, *Cold Spring Harbor, L. I.*

CYTISUS NUBIGENUS.—One of the most agreeable works that has found its way to our table, from London of late, is C. Piazzi Smyth's "Teneriffe, an Astronomer's Experiment; or Specialities of a Residence above the Clouds." It is illustrated with Photo Stereoscopic views, the first book of the kind. Mr. Smyth and his suite passed some months near the summit of the peak of Teneriffe in astronomical observations, and has made a popular narrative of the expedition, in which he was accompanied by his wife. He appears to have been an enthusiastic naturalist as well as astronomer. We can find room only for the following extracts:

"We were travelling now over rough ground of volcanic rubbish, loose cinders, and one would think in such constant motion that no plants could retain a footing. Nor can any one of them do so except the *Cytisus Nubigenus*, and that rejoices in the site and flourishes. How wonderful the adaptations of nature to the necessities of different regions. For here, where the ceaseless motion of the sliding particles composing a hill side, destroys every other living thing; where the aridity of the soil during many months is only surpassed by the aridity of the air, which is dryer than that of Sahara, nature has produced a plant, that on the mere remembrance of winter rain, long since evaporated, can furnish no contemptible supply of wood; and with its richly stored, white flowers, arranged in close rows along its smaller branches, affords illimitable honey-making materials to all the bees of the country. The inhabitants of the lower strata fasten their bee-hives on mules, and pasture their bees here every summer. . . . . .

"The great Dragon Tree, *Dracaena Draco*, to which most sober naturalists attribute the age of 6000 years, proudly raises its antique arms above every thing around, with its enormous root like branches, and is now well cared for by a Spanish nobleman who has purchased the place where it grows."

DIGNITY OF LABOR.—A busy man, says Fraser's Magazine, finds a relish in simple recreations; while a man who has nothing to do, finds all things wearisome, and thinks that life is used up; you cannot excite his interest by any amusement which is not highly spiced with the cayenne of vice. It was a glass of water the wicked old Frenchwoman was drinking when she said, "Oh, that this were a sin to give it a relish." Give me the man, I say, who can turn his hand to all things, and who is not ashamed to confess that he can do so. Who can preach a sermon, nail up a paling, prune a fruit tree, make a water wheel for his little boy, write an article for Fraser, or a leader for the Times, or the Spectator.

COVERINGS, MATS, &C.—It may be well to remember in the approaching cold weather, that whatever covering is used, whether straw mats, bast mats, cloth, or wood, they should be elevated above the surface to be covered, so as to contain as much confined air as possible. Confined air is one of the worst conductors of heat; the covering will not radiate, or give out heat, till the confined air and covering are both heated above the state of the atmosphere; and the

transmission of heat will take place more slowly through the confined air than anything else: thus, for very little trouble, by elevating our coverings, we surround our plants or plant-structures with a substance which is very retentive of heat, and increases the power of the covering in an immense degree. The heat has most tendency to ascend upwards, and this should be most guarded against; but it will also escape by the sides, and to confine the air and heat completely, the plant or plant-structure must be covered all round from the external air.

THE YAM.—The fitness of the plant for garden purposes, says the London *Gardener's Chronicle*, is now incontestable; and we are glad to be able to add that means now exist of attempting to improve its qualities, by rendering it more hardy, or more productive. We are informed by M. Duchartre, in a paper recently read before the Horticultural Society of Paris, that among some Yams sent by M. de Montigny from China to the Imperial nursery of Algeria, a female made its appearance. All the others had proved males. Ripe seeds were produced by the female; other females were raised in Paris from the Algerine seeds; and they too have seeded, so that we now possess the usual means of operating experimentally upon the Chinese stranger. It appears certain that this Yam is one of the plants that, like the Potato and the Turnip, are prone to alter their habits under the influence of domestication. We therefore trust, that our skillful breeders will immediately take it in hand. They cannot undertake a task more likely to abound in great results.

SEWING MACHINES.—The change which has come over the world in regard to machinery to abridge labor, is one of the evidences of a better educated community than once existed among us. It is not many years since certain people always asked if a newspaper was printed on machine-paper, and if it was they rejected it as an imposition, because it deprived laborers of work. All this is discarded as antiquated imposture, and we have now the sewing machine in most well regulated families. Wheeler & Wilson's, which we see advertised in our fly sheets, has a large popularity, and we are assured by those who work with it that it is all that can be desired. We hope it is used where the *Horticulturist* is taken, for then the ladies will have more time to read about the garden than if they were always stitch, stitching! Wheeler and Wilson's machines work *rapidly*, and with *little fatigue* to the worker.

AUTUMN STRAWBERRY.—Mr. P. Raabe has exhibited a very fine Fall-bearing strawberry, called the *Delice d'Automne*, which fruits very finely till frost, and in the green-house, in pots, till December. It has been noticed by Dr. Lindley in the "Gardener's Chronicle," very favorably. It is a hybrid, between Perpetual Rouge and British Queen; the fruit about as large as that of Burr's New Pine, the external appearance more like Early Scarlet, with a flavor of British Queen, but more vinous, and highly delicious. The berries produced in autumn are still better than those in spring. Taken altogether it would prove a favorite from its fine size, exquisite flavor, hardiness, and great productiveness, even if it did not bear in the fall.

With Mr. Raabe it bore abundantly last spring with very little attention, and the same plants in pots were again in bearing Sept. 15th, and will continue so probably till December; it makes runners rather freely. To have a good crop in fall, the runners should not be permitted on the plant. The flavor is perfectly delicious. We are indebted to Mr. Raabe for plants, and to his able foreman, Mr. Pantlen, an enthusiastic and progressive gardener, for other favors of interest to our readers.

MR. EDITOR:—A lately published periodical contains a very sensible article about Pear, culture, from the able pen of our friend, Dr. Ward. He takes a fair ground, and seems to look, as we all do, to further experiments and results for a conclusion.

I am not going to stand up in vindication of the recently so much abused Pear. It is all the same to me if many choose to be partial, and to scorn one of our best fruits. It will not prevent me from pursuing my course, and delighting in luscious fruit. But, in justice, can Dr. Ward charge to the Pear the slight expense of hoeing, when a stalk of corn, some few carrots, beets,

potatoes, &c., require just as much hoeing? and how different the result! A Pear-tree of good size has not many weeds growing under its shade, and those which *can* grow there are easily removed; the rest is the work of the plow or cultivator.

Speaking of Mr. Hovey, he seems to suggest that this gentleman spends a great deal for that operation. I wish Mr. H. would let us know how many Pear-trees, of about ten to fifteen feet high and pyramidal in their form, one man can clean in a day? I doubt if it would amount to one cent in a season, for twice hoeing, per tree.

What care do we not bestow on a flower, blossoming only once in a year, and requiring constant mulching, cleaning and watering for all the balance of the time? Where trees, as certainly Mr. Hovey's do, yield from half a bushel to a barrel per tree, of fine, saleable fruit, can we, in justice, pretend that such a profitable plant should not require any of the common expense so readily and repeatedly granted to corn-stalks, cabbages (worth two cents apiece), and other inferior vegetable products?

I will say no more, and I only write these few lines to give fair play to the Pear in the pending controversy. LEO.

DEMOCRAT AND SCHMAN PEARS.—Mr. J. J. Younker has forwarded specimens of the Democrat and Schman pears, the former medium size, and a very excellent August variety worthy of cultivation; the Schman not equal to others of the same season already cultivated. The Democrat originated on the farm of a neighbor of Mr. Y., in Bucks County, Pennsylvania.

NEW APRICOT.—Among the examples of orchard-house growth that have been sent us, one of the prettiest was a little specimen in an 8-inch pot of a grafted seedling from the Pitmaston Orange Nectarine, raised four years ago. In color, size, and flavor, it is superior to its parent, from which it also differs in the leaves being more shining, and their glands reniform not globose. The tree is said to be more hardy; and is remarkable for fertility, very small plants from nine inches to a foot high having each borne from four to six capital nectarines. We understand that it has been sold by Mr. Rivers under the name of Rivers' Orange.—*Gardener's Chronicle.*

The influence of stock upon the scion is an interesting topic. I know of an instance where three grafts of the Dix pear—notorious, you know, for coming late into bearing—were inserted, on the same day, some ten years ago, into three different stocks. On two of them the grafts have been increasing in growth slowly, year by year, without producing fruit or fruit bud. On the other the graft commenced bearing the *first year after insertion*, and has annually increased in productiveness; (until this year, when, as it happens, there is not a pear on it). My impression is that they were all double-worked. I am certain that the last-mentioned—the productive one—was; and perhaps you would like to know the name of the pear whose stock imparted such early fruitfulness to the tardy Dix. *So should I.*

By the way, the owner—a veteran pomologist—considers the Dix as the prince of all pears.

My own experience is quite similar. Two scions, taken from a small tree of the Pinneo pear, purchased of Messrs. Hovey & Co., in 1854, were set in the top limbs of my old English

Jargonelle, and both fruited in 1855, and also in 1857; (no fruit this year, although the bloom was good;) while the tree itself, planted in my garden, in 1854, has not yet even blossomed, although it has made a healthy and handsome growth. D. S. DEWEY.

EDITOR OF HORTICULTURIST:—I send you some grapes to show you, and inform, through you, our friends Tompkins of New York and Campbell of Ohio, that I have an aim above Fox grapes. Not one variety of these I send you has been grown for show; but have had somewhat a natural course; this being one of my plans to see what may be expected of them when under high and systematic training.

If your correspondents above alluded to, think I know nothing of trenching, &c., they ought to see my border of three hundred feet long, ten feet wide, two and a-half to three feet deep, properly prepared; with eighty varieties on it, some but two years old next spring, which have new canes twenty feet long.

And I can also show a Union Village with three shoots twenty, twenty-five, and thirty feet long, and one and a-third in diameter at the ground, all grown this season, in soil wherein neither spade, plough, pick, nor any other implement of agriculture ever entered within thirty feet of where it stands, except the little hole made when the vine was planted a few years ago, and grafted with Union Village in the spring of 1857. Can your correspondents account for this? I can, and may tell them many more things if they will condescend to write to me on the subject. Your opinion of the grapes will be a pleasure to me. S. M.

Calmdale, Pa.

[The grapes received are Louisa, earlier and better than Isabella, Delaware Burgundy, a fine wine grape; Concord, the best we have ever seen and very good; Cassady, excellent; Garrogues, not as good as desirable; White, Sweet Water, not ripe; Clara, excellent; Diana, quite up to its reputation; Catawba, ditto; and Sage, good for nothing, and only sent for a curiosity and to create a smell, we suppose; Union Village, most agreeable and "good;" To Kalon, good; Herbemont's Madeira, very highly flavored; Pitmaston, or White Cluster, not ripe; Canadian Chief, native or not, most excellent; Secord's Sweet Water, not so good as the last; Ontario, very large, but inferior to Union Village; Christie's Improved Isabella; improved in size enormously, but we cannot say better than Isabella, from this sample.—ED.]

EVERGREENS.—Mr. Barron, the gardener at Elvaston Castle, protects the leading shoots of the most rare and valuable kinds of evergreens which are liable to sustain injury from frosts, by suspending a green bell-glass over the leading shoot in autumn, till the plants are well established. This prevents moisture from settling on the top, and maintains a more equal temperature round that part. Mr. Barron puts on the glass thus early, because he is of opinion that much of the injury is done in autumn, for he frequently finds, by cutting transversely through the incipient bud, that it is brown, and sometimes quite dead; hence, these glasses are suspended before the severe autumn frosts occur. No stronger proof of the value of this precautionary measure could be adduced than that trees so protected at Elvaston are never injured, while others left to take their chance are stunted, miserable-looking bushes. If we want good cedars of Lebanon, for instance, in America, this plan should be tried; after the tree is well grown, the necessity ceases, as we have remarked at several places the past season; but we would not confine the experiment, which would not be costly, to any one species of evergreen.

TRITONIA (KNIPHOFIA) UVARIA.—Being somewhat acquainted with bulbous roots, many inquiries have been made of me respecting the "new Kniphofia Uvaria, shown 1858, for the first time," etc., and seeing no more minute description of that plant in your valuable *Horticulturist*, I thought it proper to tell its history, as far as I know it.

I am sorry to say, that instead of being new, it is one of our oldest plants we know about, as already Theophrast (born 371 years before Christ) gives a glorious description of it under the name Iris Uvaria. It is quite natural that such an old plant should change its name

often, as the science of botany progresses; we therefore find it called by Theophrastus, Iris Uvaria; Linnéé, as Aletris Uvaria, or Aloe Uvaria; Wildenow, as Veltheimia Uvaria; Curtis, Gawber, Aiton, and Redouté, as Tritoma Uvaria; Roth, as Veltheimia speciosa; Lamark, as Aloe longifolia; Link, Romer and Shultes, as Thritomanthe Uvaria; Mench dedicated it to his friend Kniphoff as Kniphofia aloeides, while Hooker changed aloeides into the more significant name Uvaria, which name it bears now in the catalogues. When the Dutch had possession of Cape Hope, they brought some plants home from there; it came to England in 1707, but was not much distributed.

There are seven more varieties known, some of which are even finer than Uvaria, but are not quite as hardy, as they did not stand the winter in 1855. K. Uvaria was killed in the hard winter of 1856.

But even if they were very tender, they would repay the little extra attention, as few plants make such a magnificent display, and have such an ornamental appearance, particularly when well established, it is then not rare to have the same plant in flower for four months. It has the most effect when planted in masses. P. RAABE.

Philadelphia.

A NEW AND MOST VALUABLE FLOWERING SHRUB.—The *Indigofera dosua*, from the descriptions received from abroad, promises to be one of those universal favorites which few plants attain. It was received but lately in England from the South of France, and is thus described by a correspondent:

"I have often remarked a disparity in the rate of progress, towards the goal of popular favor, between a *new* hardy flowering shrub and a *new* florists' flower. True it is, and a little reflection is sufficient to explain the anomaly. Our Roses, Pelargoniums, and such plants are of a fashionable throng; and the moment a new member is obtained, the graceful neophyte is paraded forth with gay, floating banners, amid the flourishing of trumpets and the noise of fame. The new flowering shrub, though possessed of the same intrinsic excellence, is less favorably circumstanced. Naturally slow in its development, belonging to no gay coterie, it does not come thus prominently before the public. It moves slowly and silently into the pathway of fame, depending on time and its own merits for patronage and position.

"I have been led to these remarks through having recently met with a beautiful new hardy shrub at the Cheshunt Nurseries. It grows naturally in Upper Nepaul, at Suemba, where it is called *Dosi-swa* by the natives, and hence it was named by Professor Don, *dosua*.

"The plant is growing in the natural soil of the Cheshunt Nurseries, which is a moderately light garden loam. That it is hardy cannot be doubted, for it has withstood the two last winters, wholly unprotected, out of doors. The plant is now about four feet high, and six yards in circumference, composed of numerous long pointed shoots, resembling a dwarf Willow in general outline. More than a thousand elegant spikes of purple pea-shaped blossoms, averaging three inches in length, adorn the bush at the present time; and, judging from those still unexpanded, there would seem a line of succession long enough to continue the blooming period from this time till November. The stems continue growing during summer, and from the axil of every newborn leaf springs a spike of flowers. The leaves are composed of small oval leaflets, ranged along a tapering mid-rib, oppositely and in pairs, from eight to ten pairs of leaflets forming a leaf about three inches long.

"The Rose has long been considered the queen of flowers, and this might with equal justice be installed as the queen of shrubs. Although new, the plant is comparatively cheap, and every lover of a garden should hasten to possess it."

AT KEW.—*Nymphæa gigantea* from Moreton Bay is also in bloom. The leaves of this new species are small compared with the size of the flowers, which it is reported should measure one foot in diameter. The blooms hitherto produced at Kew, however, do not measure above half that size. They are blue, with yellow centres, and rise on strong footstalks at least one foot above

the surface of the water. In order to have this Lily in perfection, it is thought it will require to be planted in deep water. A fine specimen of the Madagascar Lattice plant (Ouvirandra fenestralis) is also growing in this house. Its leaves are quite one foot in length and four inches in width. It has flowered and ripened seeds from which young plants have been raised.

FRUIT.—That the average season for fruit has been a poor one in most sections of the union, all admit; but if report is to be believed, there have been some instances of remarkable success. In regard to peaches, the prices have been unusually high, very few cultivators having any for sale; yet we hear that the Messrs. Reybold, of Delaware, have sent fifty thousand dollars' worth to the markets of Baltimore, Philadelphia, and New York, keeping a large steamboat of their own for the conveyance. These peaches were raised on an island, newly planted, in the Chesapeake Bay, their old orchard in Delaware having failed. Another party is reported to have made ten thousand dollars the past season by peaches alone. We can believe this if we judge by the prices obtained, for we saw fine specimens sold at rates varying from four to eight dollars the bushel. Plums, too, made their appearance in considerable abundance from the Delaware Peninsula, where their enemy does not seem yet to have penetrated, but where a railroad having been made, no doubt he will soon be *en route*. Apples are very scarce everywhere, poor ones commanding from three to five dollars the barrel. The best pears have been retailed at twenty-five cents each. Those few who have had crops may congratulate themselves on the prices obtained from

> That bounteous feast which Earth, the general mother,
> Pours from her fairest bosom, when she smiles
> In the embrace of Autumn.

THE PLOUGHING MACHINE mentioned last month was taken to the Illinois State Fair, where, we hear it has done everything that was hoped for it.

SORGUM SACCHARATUM.—What has become of it? and where *is* the profit on the sugar and molasses. Echo—where?

THE POTATO DISEASE is represented as having made considerable inroads on the prospects of the Irish and English crop, and what is very singular, something extremely like it has attacked the scarlet Geraniums.

WE-BEE-TUCK APPLE.—An early apple under this name reached us by the kindness of Myron B. Benton, of Leedsville, Dutchess County, New York. It is a natural fruit on the farm of W. N. Benton, and from the only tree in existence, and is named after the beautiful Indian stream near which it stands. We cannot say that it has merits to warrant its coming in competition with others that ripen at the same time, early September.

MILLER SEEDLING, from James O. Miller, Montgomery, Orange Co., New York, which has received a prize at the State Fair of New York, deserves the attention it has received. It commences to ripen in September, and gradually ripens for two months. We find it excellent.

BUCKLEYA DISTICHOPHYLLA.—We were much pleased to receive a specimen of this new genus of American Shrubs. The plant seems to have been known for some time to botanists, but so imperfectly as not to have been properly placed until comparatively recently. It was named by Dr. Torrey in compliment to Mr. S. B. Buckley, and described by Dr. Gray, in 1847; and writing of the plant in 1854, Dr. Gray says it proved perfectly hardy in the Cambridge Massachusetts Botanical Garden. The flowers are small and very insignificant, but the foliage is very pretty, reminding one at first sight of *Fraxinus Centiscifolia*.

CATALOGUES, &C., RECEIVED.—Abridged Catalogue of Fruit and Ornamental Trees, Shrubs Plants, &c., cultivated and for sale by J. Huggins, Woodburn, Illinois. Excellent.

The Oregon Farmer, published at Portland, Oregon, is a very spirited and well-printed sheet

neatly illustrated, and giving strong evidence that the editor knows what he is about. W. B. Taylor & Co. are the publishers.

Supplement to the Descriptive Catalogue of Andrè Leroy's Nurseries, Angers, France. Agent, F. A. Brugiere, 138 Pearl Street, New York.

Catalogue of Fruit Trees of the West Feliciana Nurseries. Dr. James H. Grain, Agent, Cain, Illinois.

Catalogue of 1858 and 1859, Fruit and Ornamental Trees, Vines, &c. By Isaac Pullen, Hightstown, N. J. A valuable catalogue of a valuable collection.

Supplementary Catalogue 1858 and 1859. Wm. R. Prince & Co., Flushing, N. Y.

Catalogue 1858 and 1859, of Gloaming Nursery, Clarkesville, Ga. By John Van Buren.

J. M. Thorburn & Co's., Catalogue of Bulbous Flowering Roots, 15 John Street, N. Y.

Cheltenham Nurseries, Haines & Walker, near Germantown, Pa., Fruit and ornamental Trees.

Catalogue of Grape Vines, Vinwood Grape Nurseries, Ilion, Herk. County, N. Y. J. D. Ingersoll, Proprietor. Embraces all the Grapes of value.

Grape Vines, Fruit Trees, &c. E. Miles, Sag Harbor, Long Island.

ERRATUM.—The Boston, or Pinneo Pear, was last week by an inadvertency called also the Hebron—they are distinct fruits; also, on page 483, "Harvey" is misprinted for Hovey.

ANSWERS TO CORRESPONDENTS.

J. B * * * * writes the publisher of this work that he has concluded his mind can do without it, as it contained so much last year about Cuba, and he declares himself to be "only interested in apples." Well, we are not pleased to part company with any; but if he has joy in the adieu, he may compare himself to the resigned Mussulman, of whom Mr. Layard made some statistical inquiries. His reply contained these charming confessions: "As to what one person loads on his mules, and the other stows away in the bottom of his ship, that is no business of mine. Listen, O, my son! There is no wisdom equal to the belief in God! He created the world, and shall we liken ourselves unto Him, in seeking to penetrate into the mysteries of His creation? Shall we say, 'Behold, this star spinneth round that star, and this other star with a tail goeth and cometh in so many years?' Let it go! He from whose hand it came will guide and direct it. * * * I praise God that I seek not that which I require not. Thou art learned in the things I care not for, and for that which thou hast seen, I defile it. Will much knowledge create thee a double belly? or wilt thou seek Paradise with thine eyes?"

Some time since, a person wrote the Philadelphia publisher that the *Horticulturist* contained *too much information!* Verily, it is difficult to fathom the wishes of some people. We have to proceed as if all our readers were in search of knowledge, make the work *as good as we can*, and leave it to the appreciation of those sufficiently informed to desire to know more.

CALIFORNIA SEEDS.—(J. B. Rumford.) Many thanks for your attention. We believe your plants are undescribed, at any rate have been unable so far to ascertain their names. A few seeds of the Wappatoo, formerly sent have grown; but we failed with the Camas. We hope for better success with these.

Apricots usually bear fruit well on the Peach stock, but they are not considered so durable as when worked on Plum, or their own roots. Your trees are probably growing very vigorously, and may be induced to bear earlier, either by root-pruning, or severe summer pruning. If they can be struck easily with you by cuttings, as your letter seems to indicate, they would no doubt bear much earlier, especially if the cuttings are taken from bearing trees.

GRAPES.—A SUBSCRIBER.—Your number one is the Cape; number two is the Concord, over-ripe, but the best of the lot, and best we have ever seen; number three is Hyde's Eliza, a seedling of the Isabella, and much like it in most respects.

GOSSIP.

WE should take a lesson from the Grape mildew in behalf of Gooseberries. As the disease, in its first stage, like the Grape mildew, is an *Oidium*, there is every reason to believe that the same treatment will have similar results; and as sulphur (at least sublimed sulphur), properly applied, is a sure remedy in the one case, we have no doubt about its efficacy in the other. They have, in Great Britain, an allied Fungus which attacks Gooseberries. It seldom, however, does any material injury, and never assumes the dense, matted form of the *Sphærotheca*.

IN learning, as we have done, How Plants Grow, and Why they Grow, have we not learned more of the lesson of the text placed at the beginning of this book, and of the verses that follow? "Wherefore, if God so clothe the grass of the field, shall He not much more clothe you? . . . . . Therefore, take no thought, saying, What shall we eat? or, What shall we drink? or, Wherewithal shall we be clothed? For your Heavenly Father knoweth that ye have need of all these things." And we now perceive that causing plants to grow is the very way in which He bountifully supplies these needs, and feeds, clothes, warms and shelters the myriads of beings He has made, and especially man, whom he made to have dominion over them all.—*Dr. Gray.*

WATERING newly-planted fruit trees, or shrubs, must be done with caution, and when once done, had better not be repeated too often; rather shade the ground with some loose material, which checks evaporation; and keep the roots of everything else at arm's length. For, be it remembered, that no amount of watering will compensate a fruit tree for the robbery it has sustained by other crops exhausting the soil its roots have to procure their food from. Peas, and other crops, are very often the cause of Peach trees appearing as if they wanted water, and the pump is but a poor remedy for this state of things. In fact, let it always be borne in mind, that watering by hand is an artificial operation, and is only wanted when the suffering plant is placed in artificial condition; and, even then, let it be treated as nearly as possible as nature would treat it. Do not give deluges of cold water, daily, to plants not requiring it; better, certainly, would it be to let it alone entirely.

As an example of the manner in which the subject of Orchard-houses is treated by Mr. Rivers, and by way of calling attention to a subject on which much of the success or failure of Orchard-house culture depends, we give the following:—"In the Orchard-house culture of Peaches and Nectarines, syringing must play an important part; for the red spider is so fond of their leaves, that, like Sinbad's Old Man of the Sea, he will stick closely, and cannot be dislodged without applying the syringe close to the under surface of the leaves. If this pest be suffered to make the least progress, the flavor of the fruit will be entirely destroyed. A small pocket lens in the hands of the amateur will be the best instrument to discern it; looking closely at the under surface of the leaves, if it be there, a small bright-red speck, like a red grain of sand, will be seen. The experienced gardener does not look for them. One glance at the upper surface of those leaves, which show some minute yellow specks, is quite enough for him. If, therefore, the least sign be apparent, continue the regular syringing, even till the fruit is ripe; otherwise, syringing may be discontinued when the Peaches and Nectarines commence to soften, preparatory to ripening."

In the time of gathering fruits, it may be well to remember the following, from Tusser:

"Forget it not,
Fruit bruised will rot.
Light ladder, and long,
Doth the least wrong.
Go, gather with skill,
And gather that will."

Hood thus apostrophises

OCTOBER.

"I saw old Autumn, in the misty morn,
Stand shadowless, like Silence, listening
To Silence, for no lonely bird would sing
Into his hollow ear, from woods forlorn,
Nor lowly hedge, nor solitary thorn:—
Shaking his languid locks, all dewy bright
With tangled gossamer, that fell by night,
Pearling his coronet of golden corn."

Formation of Clouds.—The visitor to mountain districts must often have observed the formation of clouds on the sides of the elevated portions, which take their flight to the upper regions and there become the floating drapery which is so much admired. Shelley in his Prometheus has finely apostrophised them thus:—

"And multitudes of dense, white, fleecy clouds were wandering in thick flocks along the mountains, *shepherded by the slow unwilling wind.*"

Education.—The following is from the pen of the editor of the Ohio Cultivator, Sept. 1, 1858:

But we are a deadly foe to sham and pretense, and never go with the multitude just because it is popular to be in the current. From our position we have often seen men who lay claim to some great things, stand on the corners and cry—lo here! or lo there! and modestly ask the world to stop till they have developed their great idea. Well when they came to get the great idea out, it was like a pollywog—all head and shoulders—tapering off to a very insignificant tail, which finally drops off, and the whole thing hops away with a bloonk! I tell you we can't afford to stop our eager battalions to look after tadpole theories. If these men have anything to say worth hearing, let them out with it! and not be putting on mysterious airs and fishing for a big douceur, like certain dark-lantern *Professors*, to pave the way with gold before they disclose a disclosure. If that is the game, I can only say—"Get out of the way, old Dan Tucker." This kind of learning and science that never discovers its philosopher's stone, until some thrifty farmer has turned it out with his plow, is entirely too slow and dull for this age.

MISCELLANEA.

Maté Tea, &c.—Measures are about being taken, through the Naval Expedition to Paraguay to introduce into the United States the *Maté*, or Paraguay tea; also a valuable medicinal plant, called *Nard*, believed to be a sure specific against the bites of venomous insects or reptiles; and a peculiar kind of honey bee, which builds on the branches of trees, instead of in hives or trunks of trees, as with the common bee.

A frequent American Phenomenon.—"Ladies or gentlemen who hitch teams with a rising man, whether in the way of matrimony, travel or business, should take care lest he be not too rising altogether, and they find themselves eventually lifted so high that their feet are no

use to them whatever. Last spring our friend Quodline planted some lima beans, and not being provided with poles, he married and settled them in life by planting in each hill sunflowers, trimming up the stalk, so that it served the purpose of a pole. For a time all went on well, till at length the sunflowers growing so much faster than the beans, the latter were *absolutely drawn up by the roots*. As we said before, John Deans emigrating into families who regard them as small potatoes, and very ambitious females of limited education, who have their eye on 'society' and a first chop spouse, will please take notice."—*Home Journal.*

CHEMICAL FARMING.—Mr. Bird, farmer, at Burton, near Bamburgh, England, has just sustained a heavy loss in a singular manner. He had a flock of 867 sheep, which were recently "dipped" in a chemical solution used for destroying ticks, and then turned out to grass. It is supposed that this solution was washed off the sheep by a shower of rain and that the grass on which it fell being eaten by the sheep poisoned them, as in six days only 26 out of the flock of 867 remained alive.

DR. THEODOR KOTSCHY has announced for publication, under the name of "Die Eichen Europa's und des Orient's," a history of all the oaks found wild in Europe and the Levant. It is to appear in 10 numbers, published every two months, each containing 10 sheets of letter-press and five plates, with the text in Latin, German, French, and English. It is well known to botanists that Dr. Kotschy has made the European Oaks his especial study, as well as those of Asia Minor, whence he has distributed many supposed new species, some of which are remarkably unlike our own. The publisher is Holzel of Olmutz.

ORCHARD HOUSES.—We should like to show the incredulous a box of fruit now before us from an ORCHARD HOUSE CULTIVATOR of some years' standing—excellently flavored, well colored Peaches and Nectarines, among the former of which is one specimen 9½ inches in circumference. The clamor that has been raised on the part of a few wrongheaded persons who have fine old trees on fine old walls against cultivation in Orchard Houses by those who have neither fine old trees nor fine old walls, has so nearly died out that we should hardly have returned to the subject had not the fruit before us shown more conclusively than ever what may be done by practical skill operating upon very rude materials.—*Gardener's Chronicle.*

WE have just received the 9th part of Weddell's excellent *Chloris Andina*, reaching as far as plate 57, with some omissions. The letterpress breaks off in the midst of Loganiaceæ. It is to be hoped that the removal of the learned and hard-working author to the Pyrenees for some years will not interrupt the regular appearance of this very valuable scientific work.

IN Regent's Park, London, there was formerly a green-house window filled with a fine collection of Cacti and similar plants. The window, or windows, for I believe there were two so formed, were pushed out, supported by three strong stone brackets, and extended a little on each side. Shelves were put up on each side, and on them plants were placed, consisting chiefly of the most beautiful Cacti of the *Echinocactus*, *Mammillaria*, and *Melocactus* subgenera. Some of the *Epiphyllums* were grown in ornamental baskets, and suspended from the roof. A more interesting sight I seldom saw. The plants grew finely, and flowered well, and were the admiration of every beholder, much more so than the usual occupants of a town window.

AMONG *birds of prey*, the male provides the food for the young, but the female feeds them. A sportsman in Scotland, shot the female of a pair of falcons. For a time he heard continual cries from the young ones, and the male was indefatigable in bringing food. After two days all was quiet. He clambered up the rock, and found the young all dead—starved to death—but absolutely walled in with food of every description that the male bird had brought.

AMONG new philosophical instruments we report, a *Garden Thermometer*, mounted on a porcelain scale, which is unaffected by the weather, and which may be said to be everlasting. The figures and divisions are not painted on the surface, but eaten into the substance of the scale by

the action of fluoric acid, rendering them perfectly indelible—an object much to be desired by gardeners, who have to use these instruments in stoves and forcing-houses, where the humidity acts on them with injurious effects. The scale being of pure white porcelain, and the figures and divisions black, the reading is at all times clear and distinct.

INTERESTING DISCOVERY.—At the last meeting of the Linnæan Society, Dr. Joseph Hooker read an extract from a letter, mentioning the discovery, near the banks of the river Amazon, of large Equisetums, the plant which abounds fossilized in coal formations. These plants were twenty feet high, and the stem was the thickness of a man's wrist. The writer of the letter stated that his surprise on the discovery of these plants, which were believed to have been extinct, could scarcely have been exceeded had he seen the saurians of former worlds revived, and rushing through the swamp.

MICROSCOPIC VIVARIUM.—A narrow glass shade, similar to those used to cover ormolu clocks, is cemented upside down on a wooden stand. Against this the microscope is placed, the thinness of the glass allowing the use of a half-inch object lens.

With this apparatus, a good instrument introduces us to a world of wonders. But those who possess no microscope, need not despair of amusement. There is a field for life-long research and interesting study in that which can be seen by the unassisted, but observing eye. And should the owner possess the glass of faith, he has a still better prospect in view, for "Eye hath not seen, nor ear heard, neither hath it entered into the heart of man to conceive, the things which God hath prepared for them that love Him."

Notes for the Month.

VINEYARD CALENDAR FOR NOVEMBER.

BY R. BUCHANAN, CINCINNATI, OHIO.

AFTER the gathering of the crop, and the fall of the leaf, the vineyard is unattractive in appearance. It has been stripped of its poetry, and presents a mere field of naked vines and dry stakes. But little work is required this month, unless hoeing or ploughing is thought necessary to be done now, in preference to spring. This is a mooted point as yet, the majority of cultivators preferring spring.

Pruning the vines may be done in the latter part of this month, if the cuttings are wanted for planting, or for sale. Some persons oppose this practice, but I have pursued it for years past, without injury to the vines. Cuttings may be planted out in nurseries this month, or even in vineyards, with safety, although the spring is generally preferred.

THE WINE.—The casks of new wine may be filled up, and the bungs driven tight, if, as is usual, the fermentation has by this time entirely ceased, and the wine is even tolerably clear.

ERRATA.—"Straining" the grapes, as printed in the calendar for October, should read "stemming."

NOTE.—The grape crop this year, in the Ohio and Missouri valleys—on all "limestone formations"—has, like the apple crop, proved almost an entire failure; and from the same cause, "mildew and rot;" not one-fifth of an average yield has been gathered. A very few exceptions are found in particular localities, where tolerably good crops have been produced; and on "sandstone formations," but little injury was sustained, and the yield is fair.

BY WILLIAM SAUNDERS, GERMANTOWN, PA.

MILDEW.—Fruit cultivators are gradually becoming aware that mildew in some one of its various developments, is the most prevalent and insidious enemy with which they have to contend. Exotic grapes are so subject to it, that their culture in open air has been abandoned, and even in glazed houses considerable attention is required to prevent its attacks. The native

grapes are not exempt, and in some seasons the foliage is so extensively injured as to materially reduce the value of the crop. The gooseberry also suffers, and even the hawthorn, lilacs, tulip trees, and other ornamental plants show the extensive range of the parasitic affection. There is a growing conviction that the cracking of the pear is the result also of a species of mildew, and it may be found that applications of sulphur-water will be a surer prevention of this disease, than those special manures which have been recommended, and which have not been found to remedy the evil, or give indications of a curative process.

The peculiar atmospherical conditions tending to the increase of mildew, are not particularly well understood. I have frequently repeated my conviction that the peculiar mildew seen on the foreign grape under glass, on the gooseberry, lilac, &c., is induced by atmospheric aridity. This mildew develops in the form of a mouldiness on the upper surface of the foliage, and frequently extends and envelops young growing shoots, in which case the bark seems to contract and crack into lengthened openings. Here can be traced a close resemblance to the cracking of the pear, going far to prove that it has the same origin. In sheltered city yards, where drying winds are arrested in their sweeping progress, and where a quiet and more humid atmosphere prevails, the foreign grape will frequently attain to a fair perfection. So also the White Doyenné pear is annually produced in its greatest perfection on trees similarly located, while in open exposures a few miles distant, a fair specimen cannot be procured. No reason that has ever been brought forward on the probable cause of pear-cracking is so philosophical, or so much in accordance with recorded facts, as that which connects it with mildew. The mildew seen on the native grape, is apparently a different fungus from the above. Here the "under" side of the leaf is attacked, destroying the vitality of the tissue, which is then tender, and is speedily scorched by sun, and the leaves decay and wither. When this occurs during the ripening of the crop, the sudden loss of foliage prevents it from maturing, and hence many bunches will show one-half of the fruit black and the other green. This apparent scorching is most noticeable during the months of August and September, when heavy night dews are succeeded by hot sun, or after a few dull or rainy days.

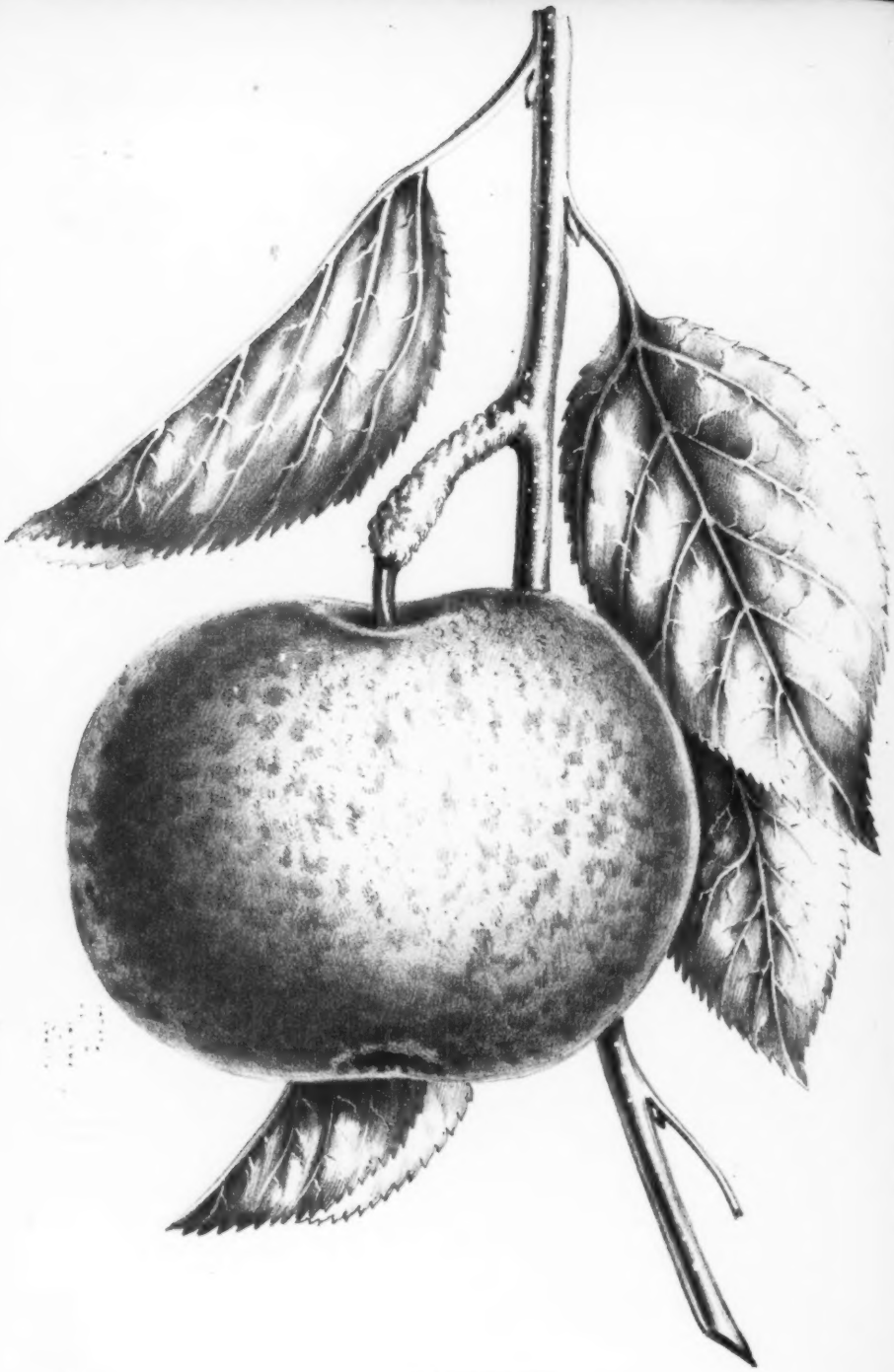
The whole subject is one demanding the general attention of cultivators; and in connection with practical observation, we would recommend the careful perusal of the valuable reports on this and kindred subjects, made from time to time during the last ten years, by the Rev. C. E. Goodrich, Utica, N. Y.

MULCHING.—Trees that have been mulched during the season, should now have all loose material carefully removed from their roots. Downing somewhere remarks, that mulching is the most beneficial practice ever introduced into our horticulture, and all who have seen the benefits derived from its proper application, will readily endorse the statement. But it is very desirable to have the soil about the roots of trees well pulverized and clean, previous to winter, otherwise in many localities, much injury will be done by mice, who find a comfortable cover for their depredations under such loose material. These animals are never troublesome in clean cultivated soil.

GREENHOUSE.—The plants will now be arranged for winter, and discrimination must be given in their treatment. The structure should be well aired during mild and quiet weather, using no fire heat until absolutely necessary. Many of the plants are now in a state of rest. Camellias, Azaleas, Daphnes, Epacris, and many other spring-flowering plants that have now completed their growth, and are well provided with flower buds, should not receive any excitement. A cool, airy situation should be chosen for them in the house, and only watered enough to prevent injury from drying of the roots. By arranging the above principally at the end of the house farthest from the source of heat, and opening the ventilators chiefly at that point, they will be under the best conditions, and the opposite end of the house being kept warmer, will be a congenial position for the young Calceolarias, Geraniums, Cinnerarias, &c.; and here also, should be placed such as are now, or shortly will be, in flower, as Chinese Primrose, Linum Trigynum, Lechenaultia Formosa, Coronilla Glauca, Oxalis, Epiphyllums, Habrothamnus, Cestrum, Begonias, Cupheas, Heliotropes, Salvias, &c. With such a list there need be no want of floral ornament:

> "Unconscious of a less propitious clime,
> There blooms exotic beauty, warm and snug,
> While the winds whistle, and the snows descend."

Bulbous roots of Hyacinths, Narcissus, Crocus, &c., for pot culture, should be planted at once; let the pots be well drained, and use light, rich soil. The pots should then be set in a sheltered corner, and covered about a foot over with sand, coal ashes, or soil, covering with boards to throw off heavy rains. Here they may remain for a few weeks to form roots, which they will speedily do, and will flower more perfectly when taken into the house. This method provides a growth of roots previous to exciting the tops, and although it would have been better to have potted a month earlier, there is still ample time to provide for a full display of flowers in the green-house, during February and March.



EQUINETELY.

Lith. by G. Hayward, 130 Wm. st. N.Y.